speco technologies®

SpecoRemote™ Software

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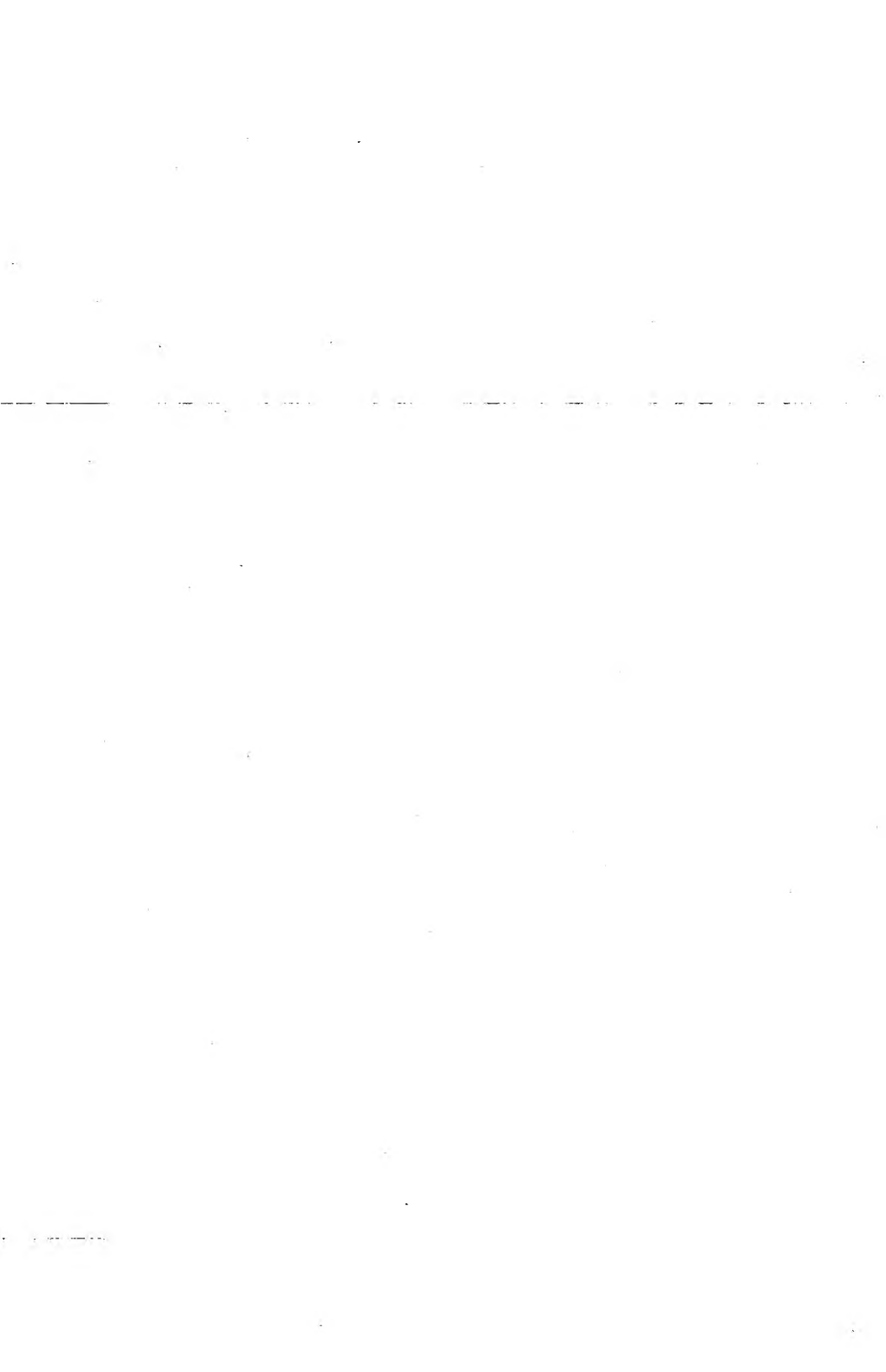**SpecoPlayer™** Software

Version 1.4

User's Manual

Table of Contents

SpecoRemote™ Software

SpecoRemote™ Software

1.   Overview

SpecoRemote™ is a remote browser-based software application designed to operate with **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series products. Using the software, users are allowed to view live and recorded video, and also   configure **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series units remotely via a LAN, WAN or Internet on your personal computer.

The **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit automatically downloads the **SpecoRemote**™ plug-ins to the connected PC when you connect to **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit by entering the IP address of the unit along with a port number (100) in the address field in the browser.

The tasks can be performed with **SpecoRemote**™ are listed below:

- Remote viewing of live / recorded video.
- Remote setup of **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit.
- Remote control of dome cameras.
- Alarm notification from the **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit.
- Up to five connections to one **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series using **SpecoRemote**™, including one Administrator and four User operators.
- Live or Playback video recording to the remote client PC.

2.   System Requirements

Items	Minimum Requirements
Personal Computer	Pentium- 4 - 1.5Ghz minimum CPU (2.0 GHZ if audio is used) RAM 256 MB minimum - Hard Drive 20 MB available for software installation
Operating System	Windows XP Home, Windows XP Pro Windows 2000 Pro
Web Browser	Microsoft Internet Explorer only. Version 6.0 only
Monitor	The minimum monitor screen resolution requirement is 1024 x 768 with 16-bit color.
Video Card	SVGA with 32MB video RAM
Network Card	10Base-T (10 Mbps) or 100Base-TX (100 Mbps) operation; must match the network configuration
DVD+/-RW Drive	Required for DVD Playback/DVD+R or DVD+RW media required

3.   Getting Started With the Installation

Refer to the following description to install the **SpecoRemote**™ remote control software.

3.1   Changing Internet Settings

The PC you want to operate with **SpecoRemote**™ should be set to accept ActiveX plug-ins. Please follow the steps to set the Internet security settings appropriately.

- Before operating the remote software, please check the IP address of your **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit. To check the IP address, press MENU key on the unit and enter password to access the Main menu; select <System Setup>, <Network Setup>, then <LAN Setup> to check the default IP address.

- Open Internet Explorer; you may open it either by clicking on the desktop icon, or by selecting the Start menu to access it.

⚠ **NOTE:** Windows IE provides the ActiveX component that is required when using the **SpecoRemote**™ software.

- Select <Tools> from the main menu of the browser, then <Internet Options>, and then click the <Security> tab.
- Select <Trusted sites> and click <Sites> to specify its security setting.
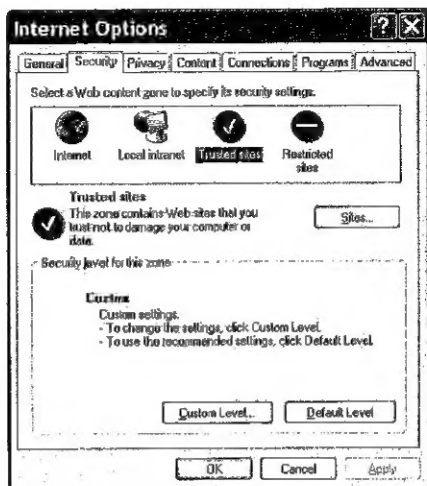
- Disable "Require server verification (https:)" for all sites in this zone. Type http:// followed by the DVR's IP address in the field and click <Add> to add this web site to the zone. Refer to the example below:
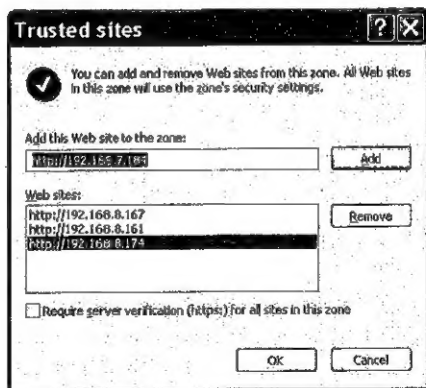
- Click <OK> to confirm the setting and close Trusted sites dialog.

- In the Security Level area, click <Custom Level>. The Security Settings screen is displayed.
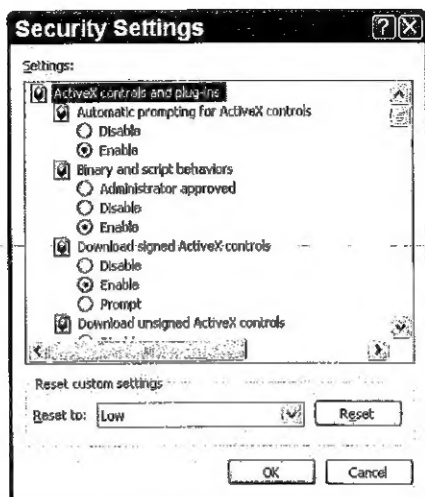
- Under <All ActiveX controls and plug-ins>, set all items to <Enable> or <Prompt>.
- Click <OK> to accept the settings and close the <Security> screen.
- Click <OK> to close Internet Options dialog.

Now, you can continue with the rest of the **SpecoRemote™** installation.

3.2 Installing Remote Software

Start the browser to initiate the installation of **SpecoRemote™** on your personal computer. In the address bar of Internet Explorer, type the DVR's Ip address preceded by http://, after the IP address, type a (:) followed by the port number. Then select "GO".

You can save the IP address of the remote unit as a Favorites Item in your web browser to have easy access next time.

- Start the IE; you may start it either by clicking on the desktop icon, or by using the Start menu to access it.
- Enter the IP address of your **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit in the address field where is at the top of the browser.

- The ActiveX controls and plug-ins dialog will show twice for confirmation, click <YES> to accept ActiveX plug-ins. The **SpecoRemote™** plug-ins will be downloaded and installed on your PC automatically when the connection is successfully made.

> ⚠ **NOTE:** Do not enter any leading 0 characters in the address, for example, "192.068.080.006" should be entered as "192.68.80.6". The default trigger port 100 is changed into another one, take port 700 for example, you should enter the IP address as "192.68.80.6:700".
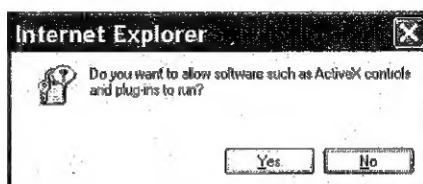
- A version check starts to verify whether **SpecoRemote™** was Installed already, and also check if the version is the same as that stored on that particular **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit. This process may take up to 30 seconds.
- When the software is completely downloaded, the Login Screen is now displayed.
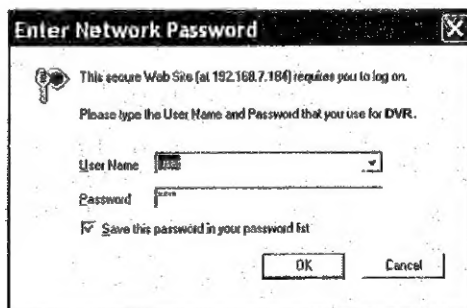
3.2.1 Log in / Log off

You can log in using the <Admin> or <User> account. <Admin> accounts can perform unit configuration freely, while a <User> account has limitations on remote access to the unit such as menu privileges.

One "Admin" and up to four "Users" can access a **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit at the same time. Furthermore, if the "Admin" account is currently accessing the unit OSD menu via front panel of the unit, then you cannot save information as an "Admin" on **SpecoRemote™**. The **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit Admin account has priority.

The following steps demonstrate procedures to view video from a remote unit:

- Start **SpecoRemote™** by entering the IP Address of the remote **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit in the Address field of the browser. Or you may click on the Favorite entry for the unit (if the IP address of the unit has been set).
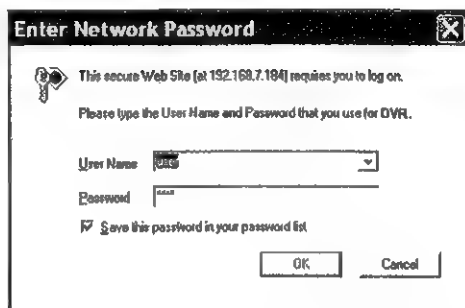- Enter your Username and password. You can save password in the list if needed. The default usernames and passwords are listed as below.

	Login Type	
Default User name	admin	user
Default Password	1234	4321

- Click <OK> to log in to the remote **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit. The process may take a few seconds.

- If the connection is made successfully, the main window displays live video of the attached cameras.

If you close the IE browser, you log off the system.

3.2.2 Software Upgrades

When a new version of **SpecoRemote™** software is available on your **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit, it will be automatically installed when you access the unit. Follow the steps to upgrade the software.
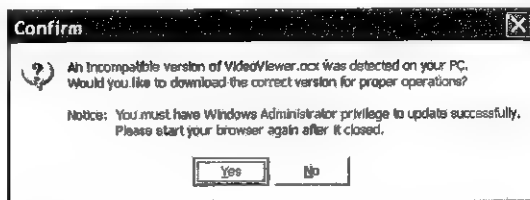
- The message "Browser will be closed" is now displayed. Click <Yes> to accept to version upgrade.
- Start your IE again and enter the IP address of the remote **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit in the Address field of the browser; or, if you have set a Favorite for the unit address, click the Favorites entry for your unit.
- When the software is completely downloaded, the Login Screen will be displayed.

4.   Basic Operation

When you successfully connect to a unit, **the SpecoRemote™** main window displays as shown below. The connected cameras of the remote unit will be listed on the left and an array of camera output windows displayed on the right of the main window.

To view the main window in full-screen view, press <F11> on your keyboard.
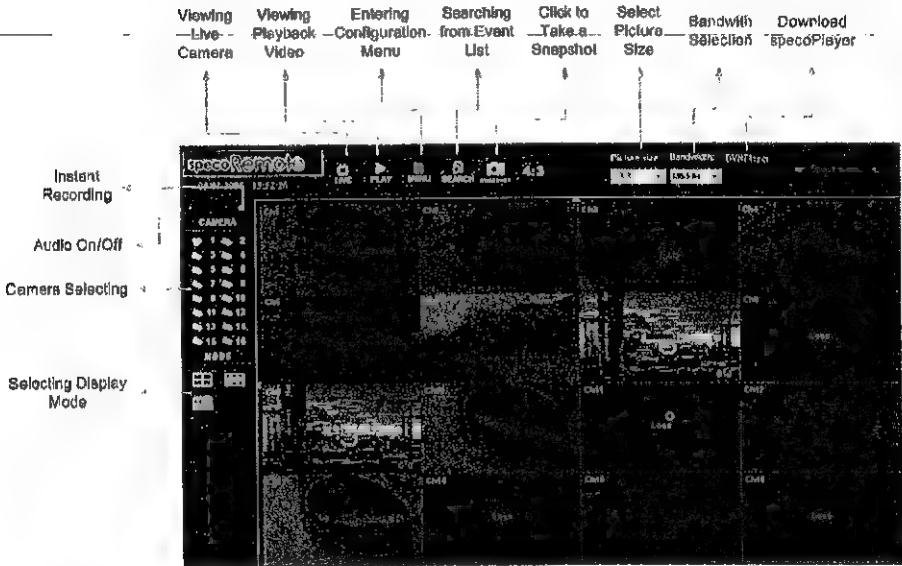
The features on **SpecoRemote™** main window will be described in the following sections.

⚠ **NOTE:** The default setting for Audio function is <OFF>.

4.1   Selecting Picture Size and Viewing Area

The aspect ratio of the camera display may be changed by selecting [4:3].

You can also select the display size with the Main window. Click the black arrow of <Picture Size>, and select from the pull-down menu. There are three options for you to choose from: 25%, 56% and 100%.

4.2 To View the Live Video

You can view live video from the cameras attached to the remote unit by clicking <Live> button on the main window toolbar.

4.2.1 Selecting Display Mode

. Click one of the mode buttons on the left-bottom corner of the main window. You can select from 4, 9 and 16 camera displays. To view a specific camera in full screen, you may either double-click on the selected camera window, or click on the corresponding CAMERA button.

4.2.2 Assigning Camera to Windows

To assign a camera to a specific location in a multi-window display mode, follow these steps:

- Select the desired display mode first by pressing the corresponding MODE button.
- Click on the corresponding CAMERA button and drag the cursor onto the selected display Location.The assignment you make will not be saved when you exit **SpecoRemote**™.
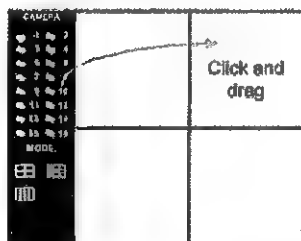
⚠ NOTE: The CAMERA button displays with a dome icon when the corresponding camera is equipped with dome control.

4.2.3   Operating Cameras with Dome Control

SpecoRemote™ allows you to control and configure a dome camera remotely.

Click on any CAMERA button to view the camera in full screen display. Then click on a CAMERA button which is displayed with a dome icon. The Dome Control Panel (shown on the right) will be displayed in the left side of the main window. The items on the dome control panel are described as follows.

Set Preset Points

This item ⬛ is used to set up preset positions. **SpecoRemote™** allows a user to set up to 255 preset positions with DynaColor, American Dynamics, and Pelco (Pelco P & Pelco D) domes.

Use the Direction buttons to move the dome camera to an appropriate position, and then select the appropriate preset number from the pull-down list. Press the ⬛ button to save the preset .

Go Preset Point

This item ⬛ is used to call the camera preset point which was set up with the set preset function. select a preset number from the pull down list and press ⬛ to recall the preset.

A.F. (Auto Focus)

Click to focus the camera automatically.

ID (Dome ID Setup)

Click the pulldown menu to select the dome ID and protocol. User privileges do not allow for changes to the dome ID and protocol; Admin privileges are necessary to access this function.

Focus

Use to adjust the camera lens to focus both near and far.

Iris

This item is used to open and close the iris to let more or less light into the camera.

Zoom

zoom-in or zoom-out using the adjusting buttons.

Direction Buttons

These buttons are used to pan and/or tilt the dome camera.

4.3 Instant Recording

The Instant Recording function allows you to record video quickly on your PC.

4.3.1 Recording Video Instantly

Follow the steps to start recording instantly:

- Click on the <Instant Recording> button.
- Select the destination file you want to save the video to.
- Click on the button again to stop recording.

⚠ **NOTE:** The instant recording video will be saved as *.drv file.

⚠ **NOTE:** The Audio function is set to OFF as the default setting.

4.3.2 To Playback Instant Recording Video

Follow the steps to playback a video recording instantly:
- Click <Play> on main window toolbar and click <Local Playback> tab.
- Click <Open> to choose a file recorded.
- Click <OK> to start playing the recorded video.

4.4 To Take a Snapshot

The software allows you to take a snapshot through the hot key on the top side of the main window. Each click takes a snapshot and it will be saved into a *.BMP file on the desktop of you PC. The snapshot file will be named as "Snapshot-*".

4.5   To Playback Video

SpecoRemote™ allows you to view recorded video either from the remote **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit, or remote playback from the hard disk drive of your PC

To access the Playback screens, click <Play> button on the main window toolbar. There are three tabbed screens are contained in the Playback screens: <Remote Playback>, <Local Playback> and <Verify> tabs. The <Remote Playback> allows you to play back from a remote unit. The <Local Playback> enables you to play back a recorded video file with **SpecoRemote™** that was downloaded and stored on the hard disk drive of your PC. The <Verify> allows verify the digital signature to authenticate a video file exported from the unit

The remote unit continues recording while you are playing back recorded video on your PC, either remote playback or local playback.

4.5.1   Playing Back Remote Video

To view remote video, click <Play> on the top of the main window toolbar, and then <Remote Playback> tab. The <Remote Playback> screen will then be displayed.
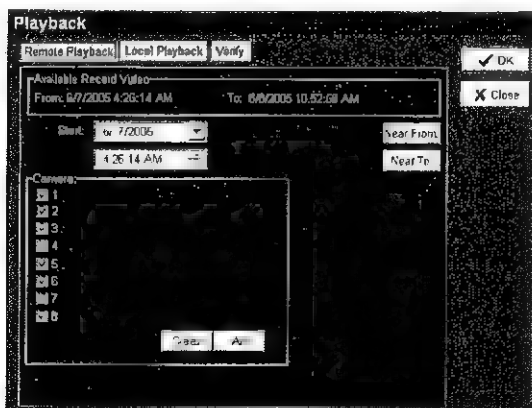
The <From> and <To> on the top of the screen displays the date and time from which recorded video is available for playback.

To play back remote video segments, follow these steps:

- Select the date and time of the segment to play back from the <Start> field. You can change the date and time either by typing desired numbers directly or using the arrow buttons.

  To type directly:
  Click on day, month and year of date field respectively, and type the desired numbers directly. Follow above steps to adjust the hour, minute and second of time field.

  To use the arrow buttons:
  Click on the arrow button next to the date field to display the calendar; then click the left and right arrow at the top of the calendar to change the date. Use up and down arrow in the right side of the time field to change to the wanted time.

  To click <Near From>:
  Click <Near From> button to set the date and time as the <From> time.

  To click <Near To>:
  Click <Near To> to set the date and time to five minutes ahead the <To> time.

- Select the camera(s) you want to play back. Click <Clear> to clear all of the camera entry selections, and click <All> to select all of the camera entries.
- Click <OK> to start the operation, or click <Close> to abort.

4.5.2 To Playback Local *.drv Files

The <Local Playback> tab allows you to play back *.drv video files that stored on your PC's hard drive.

Click the <Local Playback> tab in the <Playback> screen for displaying downloaded video. The Local Playback screen is shown below.
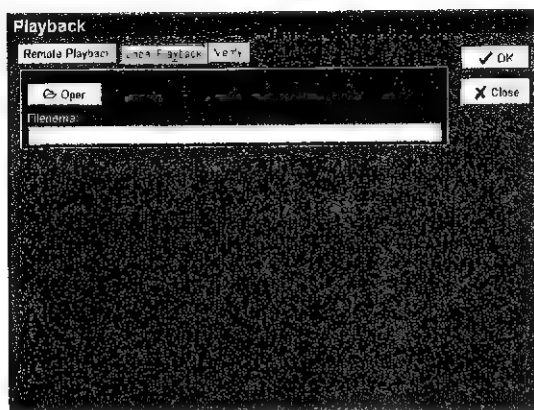
Follow the steps below to play back a downloaded *.drv file with **SpecoRemote™**.

- Click <Open> and the file selection screen is displayed.
- Select the *.drv video file to play back and click <OK>.
- Click <OK> in the <Local Playback> Screen to start the operation, or click <Cancel> to abort the playback.
- View the video playback using the Playback controls.
- After playback, click <Live> to return to live video.

4.5.3   Playback Controls

When playing back local or remote video, **SpecoRemote™** is in Playback Mode. The playback control toolbar is on the main window, as shown in the following figure.
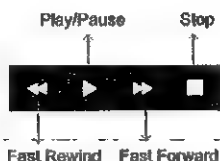
The Playback controls and indicators are described below.

Fast Rewind
Click to play the recorded video in reverse direction. Click repeatedly to select the rewind speed: 1x, 2x, 4x, 8x, 16x, or 32x.

Play / Pause
Click once to play the recorded video, click again to pause the playback.

Fast Playback
Click to play the recorded video forward. Click repeatedly to select the playback speed: 1x, 2x, 4x, 8x, 16x, or 32x.

Stop
Stop playing the recorded video.

4.6 To Zoom In/ Out the Image

This function enables you to view a live zoomed image.

A wheel mouse is required to access this function.

Follow below steps to zoom in/ out the image:
- Select the window for viewing the zooming image.
- Right click on the selected window, a square appears in the right-bottom corner.

- Rotate the wheel on the wheel mouse to select the magnification level. The available zooming range is from x1 to x7.
- Left -Click and hold the mouse to drag the window freely for seeing the wanted area. The white little square denotes the current position you are viewing.
- Right-click again to cancel zoommode.

4.7   Verifying Digital Signature

The digital signature authenticates a video file exported from the unit. Follow the description to verify the digital signature.

- Click <Play> on the main window tool bar.
- Click <Verify> tab to display the Verify window.
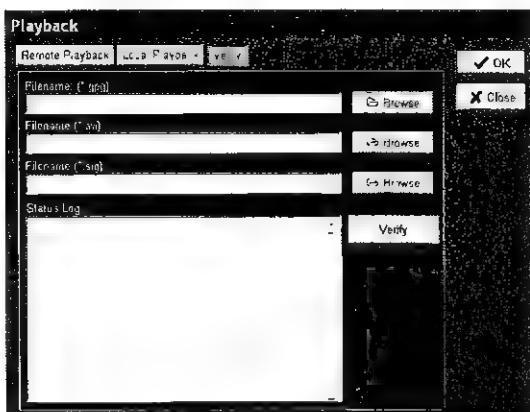
- Click <Browse> to select the *.gpg, *.drv, *.sig files respectively, which belong to the exported video you want to authenticate.
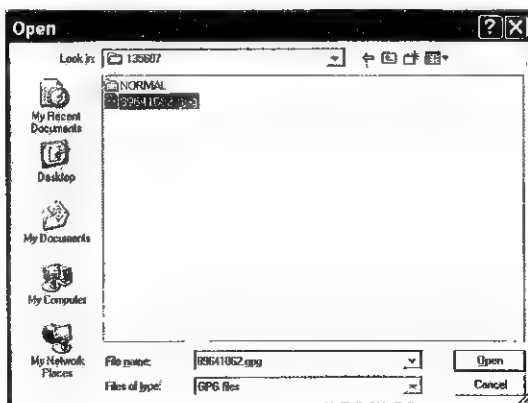
- Click <Verify> to start verifying digital signature.
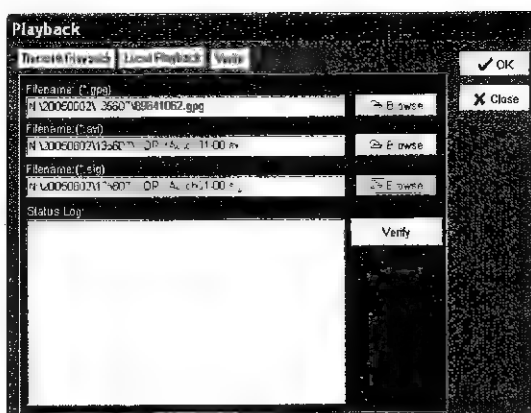
- The result of verify shows in the <Status Log> field. It returns a GOOD or BAD signature result. A GOOD signature indicates the exported clip has not been altered.
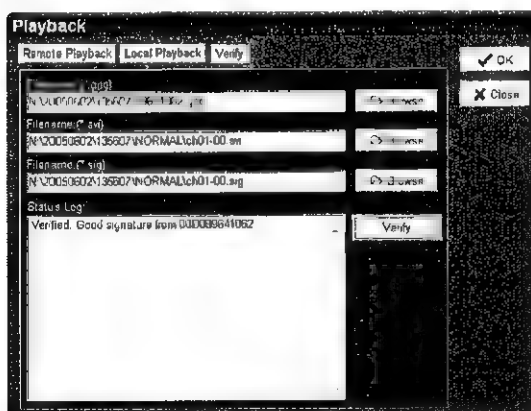
<GOOD> Signature

4.8   Search from Event List

Click SEARCH, the Event List appears. The List contains information about the alarm events that your unit recorded and saved. Up to 1024 events can be listed in the Alarm List.

The Alarm List (shown below) displays each event by its number, the date and time of the event, the status of the event (including MOTION, ALARM IN, and VIDEO LOSS), and the camera channel on which the event occurred.

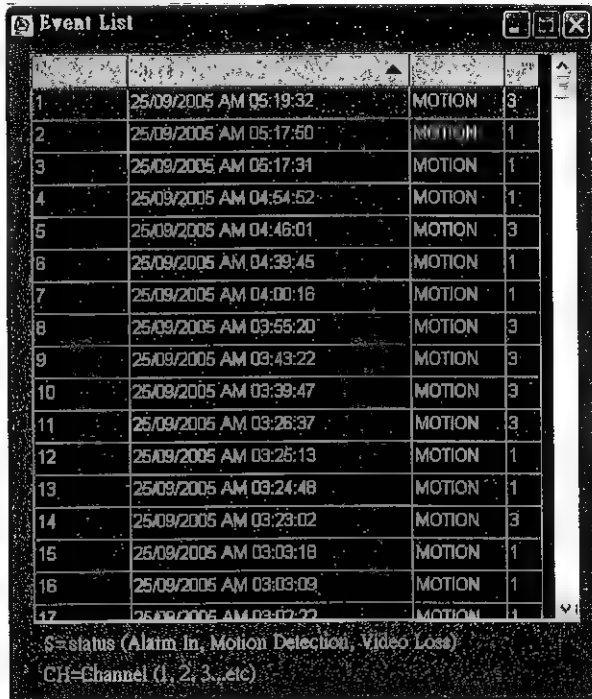|			
1	25/09/2005 AM 05:19:32	MOTION	3
2	25/09/2005 AM 05:17:50	MOTION	1
3	25/09/2005 AM 05:17:31	MOTION	1
4	25/09/2005 AM 04:54:52	MOTION	1
5	25/09/2005 AM 04:46:01	MOTION	3
6	25/09/2005 AM 04:39:45	MOTION	1
7	25/09/2005 AM 04:00:16	MOTION	1
8	25/09/2005 AM 03:55:20	MOTION	3
9	25/09/2005 AM 03:43:22	MOTION	3
10	25/09/2005 AM 03:39:47	MOTION	3
11	25/09/2005 AM 03:26:37	MOTION	3
12	25/09/2005 AM 03:25:13	MOTION	1
13	25/09/2005 AM 03:24:48	MOTION	1
14	25/09/2005 AM 03:23:02	MOTION	3
15	25/09/2005 AM 03:03:18	MOTION	1
16	25/09/2005 AM 03:03:09	MOTION	1
17	25/09/2005 AM 03:02:22	MOTION	1

S=status (Alarm In, Motion Detection, Video Loss)
CH=Channel (1, 2, 3...etc)

To view an alarm recording, follow these steps:

- Click the SEARCH button positioned in the Main Window Toolbar. The Alarm List appears.
- Scroll through the events in the Alarm List and highlight the event of interest.
- Double-click on the desired event to view the alarm recording.

5.   Configuring the Remote Unit

Click <MENU> button on the toolbar to configure a **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit remotely. The Configuration menu displays as shown below.
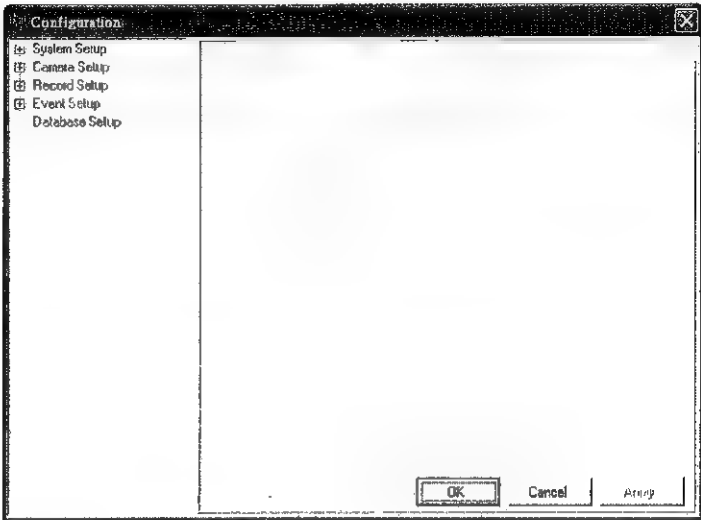
Configuration Menu

The Configuration menu contains a list of items that are used to configure **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series units remotely. The following subsections describe the configuration items and buttons used in the OSD menu.

⚠ **NOTE:** The settings in Configuration menu only apply to the unit.

The Administrator can perform unit configuration freely. If you log in **SpecoRemote™** using User account, the most settings will be read only and cannot be configured.

⚠ **NOTE:** If an Administrator account is currently accessing the unit OSD setup menu, you are not allowed to save the configuration as an Admin on **SpecoRemote™**. The **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** unit administrator account has priority.

The items in Configuration menu are described in the table below.

Item	Description
System Setup	Configures the system related items on the remote unit, such as password, date/time and network settings, etc.
Monitor Setup	Configures monitor-related items, such as brightness and saturation, etc.
Camera Setup	Configures camera titles and other camera-related items on the remote unit.
Record Setup	Configures record-related items on the remote unit, such as event and audio recording parameters.
Event Setup	Configures the way in which the remote unit handles events.

Buttons in Configuration Screens

The configuration screen contains several buttons that enable you to save and close the settings. These buttons are shown as below.

✓ OK	✗ Cancel	✔ Apply

The functions of these buttons are described below.

- **<OK>**

  You can save just the settings in the section of the Configuration screen in which you are working, click <OK> to save the settings and close the Configuration screen.

- **<Cancel>**

  Click to close the screen without saving any changes.

- **<Apply>**

  Click <Apply> to save all of the settings in the Configuration screen and apply them to the remote unit.

5.1   System Setup

The System setup screen allows a user to set language, date/time, password, and network and RS-485 settings on the remote unit.

Click <MENU> button on the main window toolbar, and expand the System setup menu by clicking the plus icon. The expanded System Setup menu displays as shown in the figure on the right.

Items in the System Setup menu are described in the following sections.

System Setup
  Version
  Language
  Date/Time
  Unit Name
  Network Setup
  RS485 Setup
  Audio Output/Key Beep
Camera Setup
Record Setup
Event Setup
Database Setup

5.1.1   Version

Displays the Model Name, Hardware version and Software version of the connected unit as shown in the figure below.
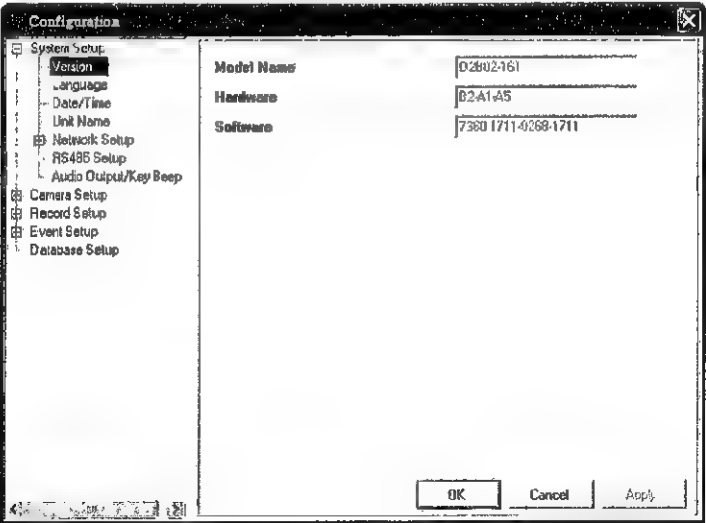
5.1.2   Language

The Language menu allows users to select the system language for the OSD menu and screen messages of the remote unit. Language selection takes effect immediately when the selection is made.

⚠ **NOTE:** The selection is used to change the system language of the remote DVR unit, but not for changing the language of the **SpecoRemote™** software.

5.1.3   Date / Time
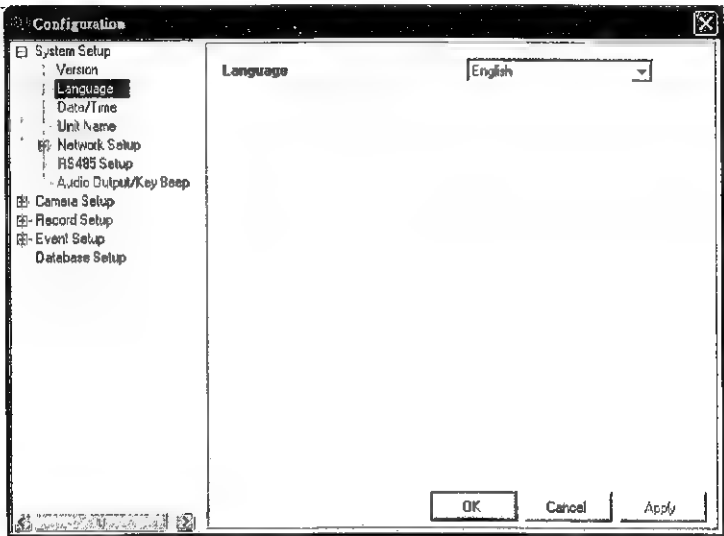
Click <Date/Time> to display the Date/Time menu, shown as follows. The menu allows user to configure the date/time related settings.

⚠ **NOTE:** The following three items "Date/Time Display", "Date/Time Display Mode" and "Date/Time Order settings" are applied to the remote DVR unit only.
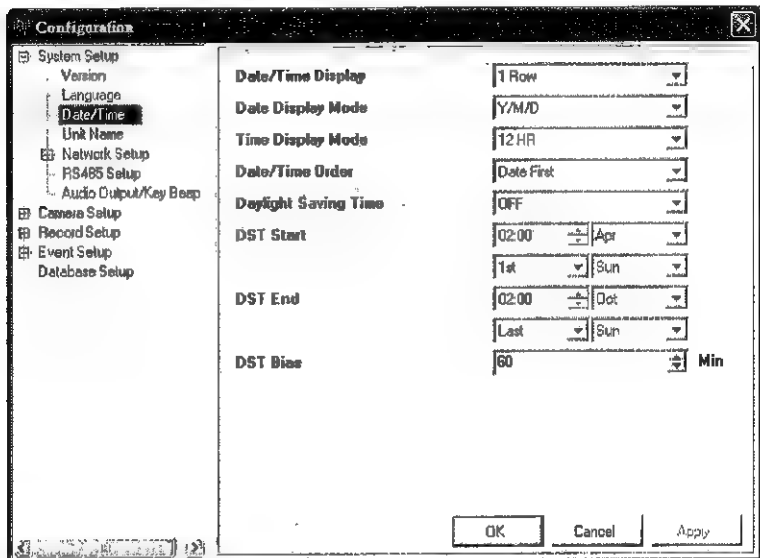
Date/Time Display

User can set the date and time information to display in one or two rows. The default is <1 Row>.

Date Display Mode

Users are allowed to set the date-displayed mode for the remote unit. The date is comprised of Year (Y), Month (M), and Day (D). To change the date-displayed mode, click on the black arrow of this item and select the desired option from the pull-down menu. The default display mode is <Y/M/D> in both NTSC and PAL formats.

Time Display Mode

Used to set the time format of the remote DVR unit in 12 hour or 24 nour. The default setting is <24 HR>.

Date/Time Order

Used to set the order of Date/Time display to <Date First> or <Time First>.

Daylight Saving Time

The following items are used for those people who live in certain regions to observe Daylight Saving Time. Select <ON> to enable the following DST settings, or <OFF> to disable the function.

- **DST Start/ DST End**

  The items are used to set the daylight saving duration. Enter the wanted DST start time and end time into both fields using the keyboard directly, or use the pull-down menu to select the desired date and time.

- **DST Bias**

  The item is used to set the amount of time to move forward from the standard time for Daylight Saving Time. The Available options are <30>, <60>, <90> and <120> minutes.

When you have entered the settings, remember to take one of the following actions.

- Click <OK> to save the modified settings.
- Click <Apply > to save all modified settings set in the configuration menu.
- Click <Cancel> to abort and leave all settings unchanged.

5.1.4　Unit Name

The item is used to change the unit name of the connected remote DVR unit. To change the unit name, type the new name in the field directly using the keyboard.
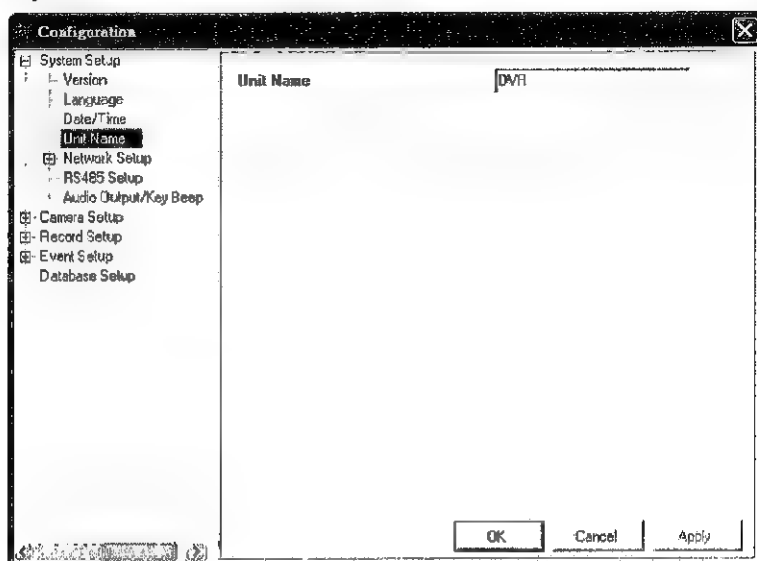
5.1.5   Network Setup

Network Setup menu contains the following three settings: "Email Address", "SMTP Setup" and "DDNS Setup". Using the mouse, click on the plus icon to directly expand the Network Setup menu.

The expanded Network Setup menu displays as shown in the figure on the right.
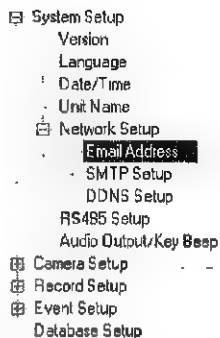
Email Address

Email Address menu (shown below) is used to edit the e-mail address where the alarm event information will be sent..Enter the e-mail address directly using your keyboard.

```
⊟ System Setup
     Version
     Language
 ᛁ   Date/Time
 ·   Unit Name
 ⊟ Network Setup
        Email Address
      · SMTP Setup
        DDNS Setup
     RS485 Setup
     Audio Output/Key Beep
⊞ Camera Setup
⊞ Record Setup
⊞ Event Setup
   Database Setup
```
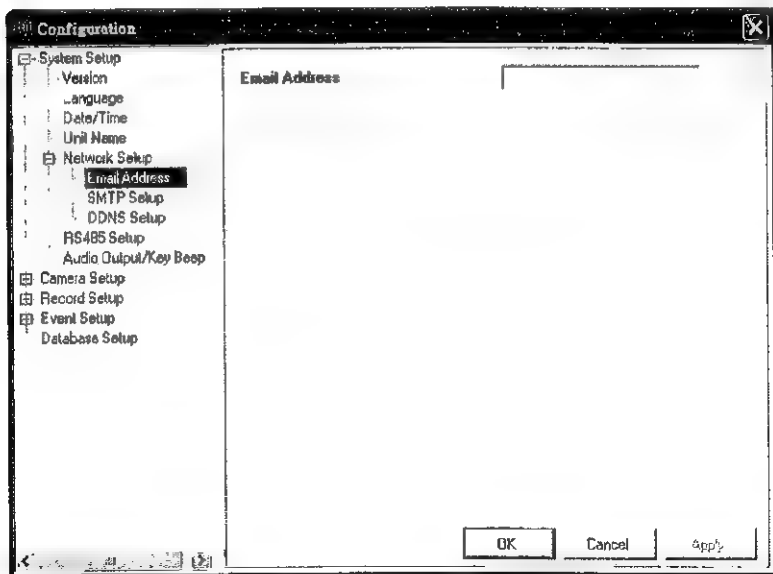
SMTP Setup

Click <SMTP Setup> to display the SMTP Setup menu, shown as below. The menu allows users to configure the SMTP related settings of the remote DVR unit.
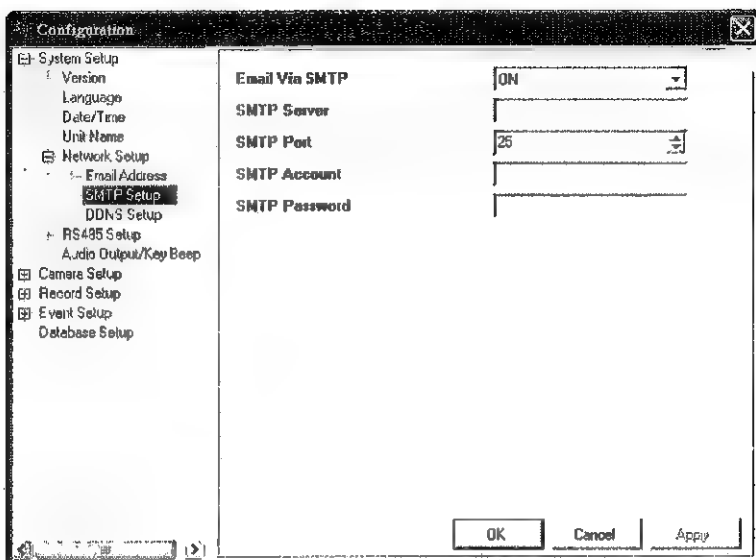
The Items in this menu are described in the following sections.

- **Email Via SMTP**

    The item enables users to determine whether or not the remote DVR unit sends e-mail via SMTP. Select <YES> to send e-mail via SMTP; if not, select <NO>.

- **SMTP Server**

    Used to setup the SMTP server.

- **SMTP Port**

    Used to change SMTP port to another port, if necessary. SMTP usually is implemented to operate over Internet port 25. Click the UP and DOWN arrows to change the port number..

- **SMTP Account**

  Used to setup the SMTP username. Enter the desired username with the keyboard.

- **SMTP Password**

  Used to setup the SMTP password. Enter the password with your keyboard.

DDNS Setup

Click <DDNS Setup> to display the DDNS Setup menu. It allows user to configure the DDNS related settings.

Once the settings are completed, the DDNS address will be:
http://yourhostname.ddns.iview-ddns.com
For example, if the chosen Host name is "SPECO", then the address will be:
http://speco.ddns.iview-ddns.com
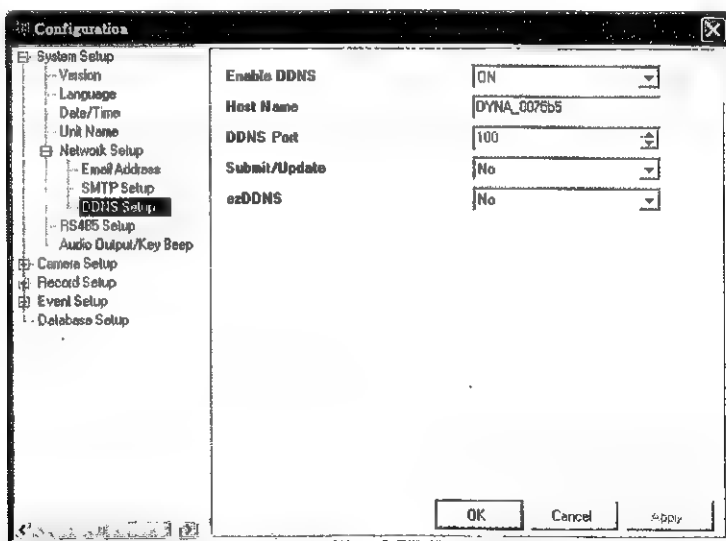
- Enable DDNS

   The item is used to enable or disable the Dynamic Domain Name Service. Select <YES> to enable the service, or <NO> to disable.

- Host Name

   The item allows user to setup a domain name.

- DDNS Port

The item allows user to setup the port for DDNS.

- Submit/Update

When the user has completed the settings, choose <Yes> to submit the changes

- ezDDNS

ezDDNS enables the users to register the host name automatically.

⚠ NOTE: The DVR must be connected to the *Real IP address, or be assigned a specific port using **Port Forwarding technique.
*A "Real IP" is one that is assigned to you by your ISP.
**A "Virtual IP" is one assigned either manually or through DHCP. When the user is assigned a Virtual IP, the user must use Port Forwarding technique to assign a specific port to the DVR.

5.1.6   RS485 Setup

Used to set up the parameters of the remote unit's RS-485 communications port. Click <RS485 Setup> to display the RS485 Setup menu.
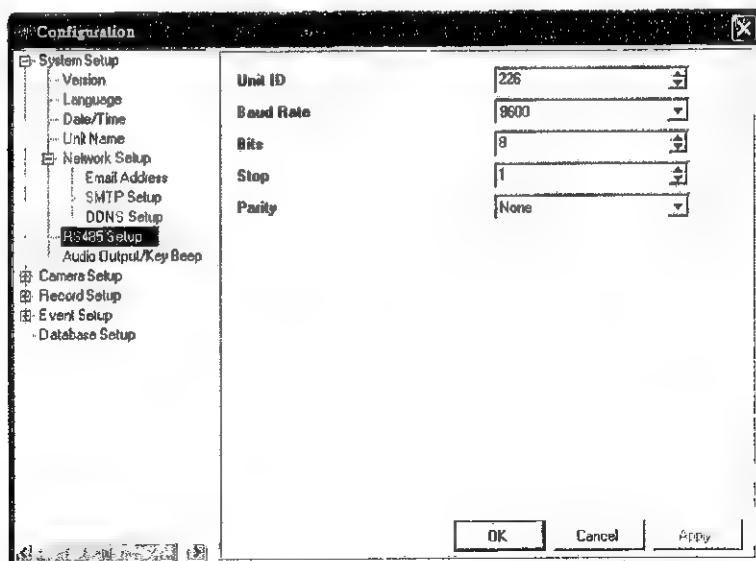
- **Unit ID**

  Used to change the RS-485 ID address of the unit. The ID is in the range from <1> to <255>. The default is <224>.

  ⚠ NOTE: Units on the same bus should never have the same RS485 ID.

- **Baud Rate**

  Allows a user to specify the baud rate for the RS485 port. The available options are <2400>, <4800>, <9600>, <19200> and <38400>. The default setting is <9600> baud.

- **Bits**

  Users are able to specify the bits that are associated with the protocol. The available options are <6>, <7> and <8> bits. The default setting is <8> bits.
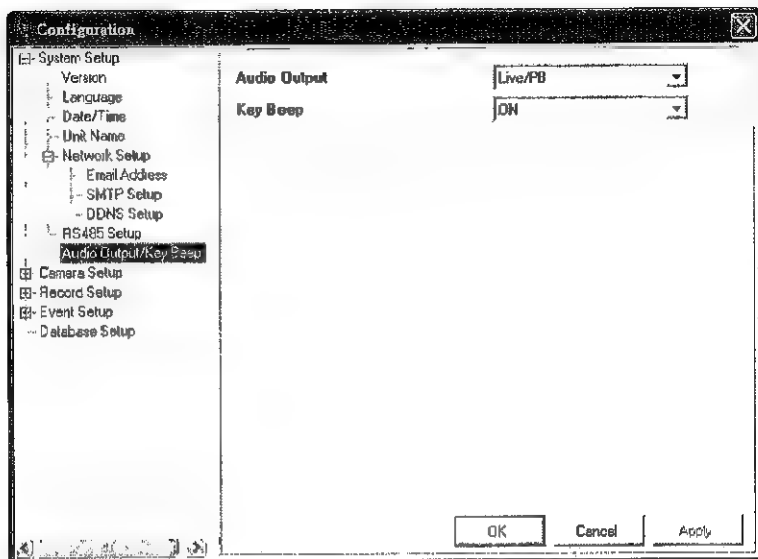
- **Stop**

  Users are able to specify the stop bit associated with this protocol. Options are <1> and <2> stop bits. The default setting is <1> stop bit.

- **Parity**

  Used to specify the parity associated with this protocol. Options are <ODD>, <EVEN>, and <NONE>. The default setting is <NONE>.

5.1.7 Audio Output

<Audio Output> is used to set the audio output mode. Click to display the menu.

The available options for this item are described as below.

<Live/ Playback>
Select the item to export audio in live mode, and audio of recorded video in playback mode, respectively.

<Always Live>
Select the item to export always audio in both live and playback mode.

<OFF>
Select the item to disable the audio output function.

<Key Beep> is used to enable or disable the unit's key tone. Select <YES> to enable the key tone, or <NO> to disable.

5.2   Camera Setup

Camera Setup menu allows users to configure camera-related items of the DVR unit remotely. Click <MENU> button on the main window toolbar, and then click <Camera Setup> to expand the menu. Click on the desired channel to set its corresponding parameters..
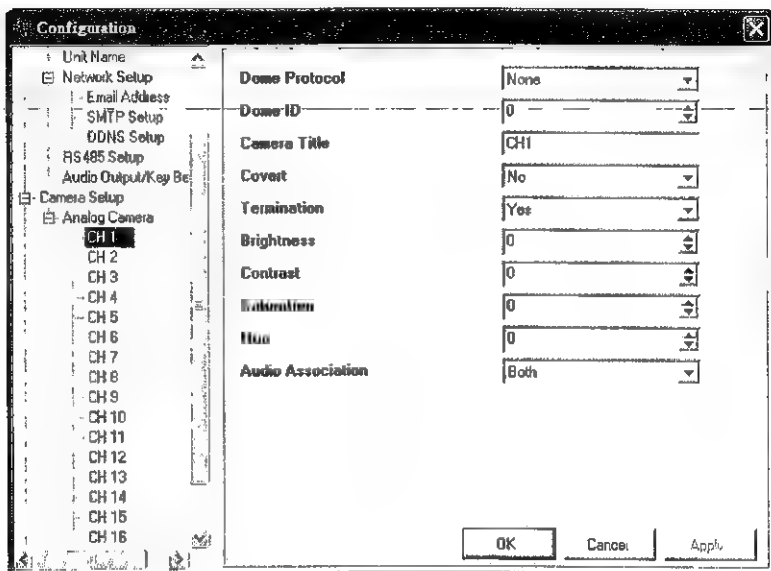
Items listed in the menu are described as follows.

Dome Protocol

Used to select the communications protocol associated with the connected dome camera(s). The available protocol includes <DynaColor>, <AD422>, <Pelco D>, <Pelco P>, <HITRON> and <None> (default).

Dome ID

Used to assign an ID number to the selected dome camera. Note that the ID number you set here must match the ID set on the dome.

Camera Title

Allow users to set a title of camera connected to the unit (up to 11 characters). The title will be displayed both on the remote DVR unit's main monitor and the **SpecoRemote™** main window.

Enter a camera title to the entry field using a keyboard. By default, the titles of cameras are numbered from 1 through 16 respectively.

Covert

Users are able to choose certain cameras to be covert while the unit is recording video. Choose a desired channel first and set the item <Covert> to <YES>. <YES> means to make the selected camera covert, and <NO> means to allow the selected camera to be vieable. The default setting is <NO>.

Termination

Used to enable / disable the 75Ω termination resistor inside the unit.. <YES>= termination resistor enabled (default); <NO> = termination resistor disabled.

⚠ **NOTE:** If the camera loop-out connectors are not used, the termination resistor should be enabled for appropriate signal termination.

Brightness

Used to adjust the image's brightness of the selected camera displayed on the monitor.

Contrast

Used to adjust the image's contrast displayed on the monitor of the selected camera.

Saturation

Used to adjust the image's saturation displayed on the monitor of the selected camera.

Hue

Used to adjust the image's hue displayed on the monitor of the selected camera.
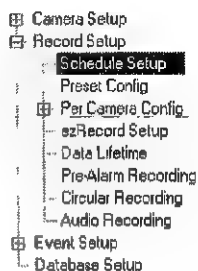
Audio Association

Used to establish the connection between the selected camera and the two audio-in channels. Select <Both>, <Left Only>, <Right Only> or <None> to set up the connection.

5.3   Record Setup

Record Setup menu allows users to set record-related items, such as recording schedule, pre-set configuration, pre-alarm recording time, or circular / linear recording, etc.

Click <MENU> button on the main window toolbar, and click the plus icon to expand Record Setup menu.

```
⊞ Camera Setup
⊟ Record Setup
    ⌐ Schedule Setup
      Preset Config
    ⊞ Per Camera Config
    ⌐ ezRecord Setup
    ⌐ Data Lifetime
      Pre-Alarm Recording
    ⌐ Circular Recording
    └ Audio Recording
⊞ Event Setup
⌐ Database Setup
```

5.3.1   Schedule Setup

Schedule Setup menu is used to set the daytime, nighttime, and weekend recording schedule. The Night and Day schedules are used to define daytime and nighttime; the Weekend schedule is tailored for weekends and holidays.
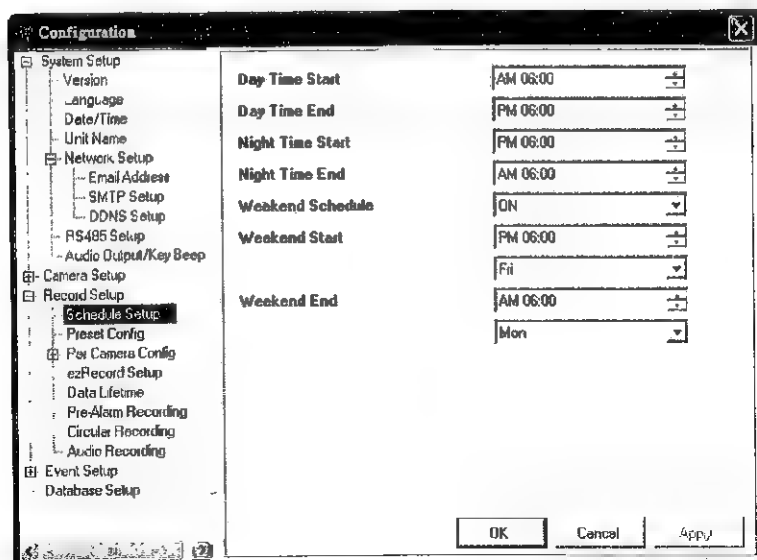
- **Day/ Night Time Start**

  Day Time Start/ Night Time Start determine the beginning of daytime and nighttime, respectively. The option is indicated in 1-minute increments. The time display format is based on the setting on Time Display Mode.

- **Weekend Schedule**

  The Weekend Schedule determines whether a weekend schedule is in effect. Choose <YES> to take effect the related weekend settings.

- **Weekend Start/End**

  Weekend Start Time indicates the specific day and time that a weekend begins, for example, FRI 18:00. The Weekend End Time indicates the specific time and day that a weekend ends, for example, MON 06:00. Time is indicated in 1-minute increments.

  Note that the value you have set indicates when the regular Day and Night scheduling ends, and Weekend recording begins.

5.3.2 Preset Configuration

<Preset Config> is used to select the preset recording quality and frame rate. Different default recording quality levels are offered for users to choose from: <Best Quality>, <Standard>, <Extended Record>, <Event Only>, and <ezRecord>.
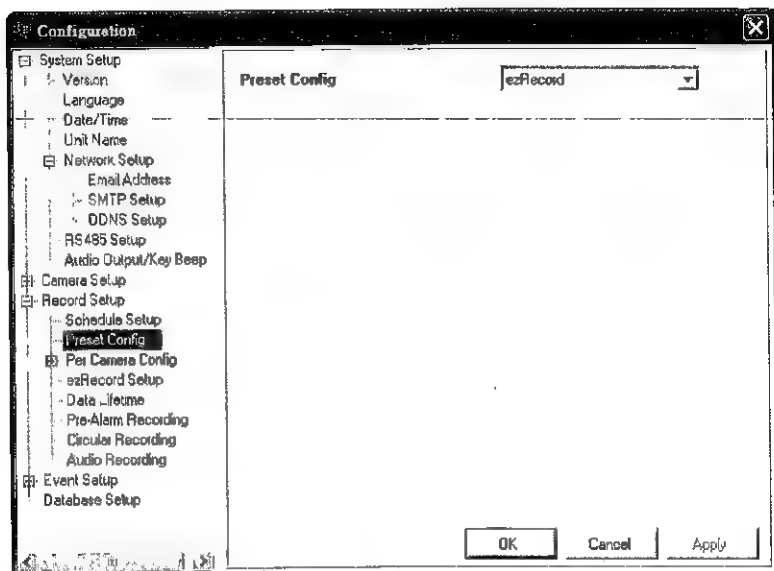
With the various Record modes, the preset configuration options for normal and event status are described in terms of relative recording rate (PPS) and recording size for each channel in the below tables.

The preset conditions override any other quality and rate settings. The default Preset Configuration setting is <Standard>.

1. The following three tables are offered for users who useDVR-4TN/ 8TN/ 16TN unit.

Record Mode: Full-D1 mode (NTSC: 720x480@30PPS) (PAL: 720x576@25PPS)						
Preset Item		Normal PPS	Normal Size	Event PPS	Event Size	Event Active
Best Quality	4ch	NTSC:7.5 PAL.6.25	28 KB	NTSC:30 PAL:25	28 KB	Both (Alarm + Motion)
	8ch	NTSC:3.75 PAL:3.12				
	16ch	1~8ch NTSC:2.75 PAL:2.12	30 KB		30 KB	
		9~16ch NTSC:1 PAL:1				
Standard	4ch	NTSC:7.5 PAL:6.25	16 KB	NTSC:30 PAL:25	28 KB	Both
	8ch	NTSC:3.75 PAL:3.12				
	16ch	1~8ch NTSC:2.75 PAL:2.12	18 KB		30 KB	
		9~16ch NTSC:1 PAL:1				
Extended Record	4ch	NTSC:7.5 PAL:6.25	4 KB	NTSC:30 PAL:25	28 KB	Both
	8ch	NTSC:3.75 PAL:3.12				
	16ch	1~8ch NTSC:2.75 PAL:2.12	6 KB		30 KB	
		9~16ch NTSC:1 PAL:1				
Event Only		0 NTSC 0 PAL	—	NTSC:30 PAL:25	30 KB	Both
OFF		User selected	User selected	User selected	User selected	User selected

Record Mode: Half-D1 mode (NTSC: 720×240@60PPS) (PAL: 720×288@50PPS)						
Preset Item		Normal PPS	Normal Size	Event PPS	Event Size	Event Active
Best Quality	4ch	NTSC:15 PAL:12.5	20 KB	30 NTSC 25 PAL	20 KB	Both (Alarm + Motion)
	8ch	NTSC:7.5 PAL:6.25				
	16ch	NTSC:3.75 PAL:3.12	25 KB		25 KB	
Standard	4ch	NTSC:15 PAL:12.5	12 KB	30 NTSC 25 PAL	20 KB	Both
	8ch	NTSC:7.5 PAL:6.25				
	16ch	NTSC:3.75 PAL:3.12	15 KB		25 KB	
Extended Record	4ch	NTSC:15 PAL:12.5	4 KB	NTSC: 30 PAL: 25	20 KB	Both
	8ch	NTSC:7.5 PAL:6.25				
	16ch	NTSC:3.75 PAL:3.12	5 KB		25 KB	
Event Only		NTSC: 0 PAL: 0	–	NTSC: 30 PAL: 25	25 KB	Both
OFF		User selected	User selected	User selected	User selected	User selected

Record Mode: CIF mode (NTSC: 360×240@120PPS) (PAL: 360×288@100PPS)						
Preset Item		Normal PPS	Normal Size	Event PPS	Event Size	Event Active
Best Quality	4ch	NTSC:30 PAL:25	10 KB	NTSC: 30 PAL: 25	10 KB	Both (Alarm + Motion)
	8ch	NTSC:15 PAL:12.5				
	16ch	NTSC:7.5 PAL:6.25	15 KB		15 KB	
Standard	4ch	NTSC:30 PAL:25	6 KB	NTSC: 30 PAL: 25	10 KB	Both
	8ch	NTSC:15 PAL:12.5				
	16ch	NTSC:7.5 PAL:6.25	9 KB		15 KB	
Extended Record	4ch	NTSC:30 PAL:25	2 KB	NTSC: 30 PAL: 25	10 KB	Both
	8ch	NTSC:15 PAL:12.5				
	16ch	NTSC:7.5 PAL:6.25	3 KB		15 KB	
Event Only		NTSC: 0 PAL: 0	–	NTSC: 30 PAL: 25	15 KB	Both
OFF		User selected	User selected	User selected	User selected	User selected

**2. The following three tables are offered for users who use DVR-16TS unit.**

Preset Item	Normal PPS		Normal Size	Event PPS	Event Size	Event Active
Best Quality	16ch	NTSC:3.75 PAL:3.12	28 K	NTSC:30 PAL:25	28 K	Both (Alarm + Motion)
Standard	16ch	NTSC:3.75 PAL:3.12	16 K	NTSC:30 PAL:25	28 K	Both
Extended Record	16ch	NTSC:3.75 PAL:3.12	4 K	NTSC:30 PAL:25	28 K	Both
Event Only	0 NTSC 0 PAL		–	30 NTSC: 25 PAL:	28 KB	Both
OFF	User selected		User selected	User selected	User selected	User selected

Record Mode: Full-D1 mode (NTSC: 720x480@60PPS) (PAL: 720x576@50PPS)

Preset Item	Normal PPS		Normal Size	Event PPS	Event Size	Event Active
Best Quality	16ch	NTSC:7.5 PAL:6.25	20 KB	NTSC:30 PAL:25	20 KB	Both (Alarm + Motion)
Standard	16ch	NTSC:7.5 PAL:6.25	12 KB	NTSC:30 PAL:25	20 KB	Both
Extended Record	16ch	NTSC:7.5 PAL:6.25	4 KB	NTSC:30 PAL:25	20 KB	Both
Event Only	NTSC: 0 PAL: 0		–	30 NTSC: 25 PA:	20 KB	Both
OFF	User selected		User selected	User selected	User selected	User selected

Record Mode: Half-D1 mode (NTSC: 720x240@120PPS) (PAL: 720x288@100PPS)

Preset Item	Normal PPS		Normal Size	Event PPS	Event Size	Event Active
Best Quality	16ch	NTSC:15 PAL:12.5	10 KB	NTSC: 30 PAL: 25	10 KB	Both (Alarm + Motion)
Standard	16ch	NTSC:15 PAL:12.5	6 KB	NTSC: 30 PAL: 25	10 KB	Both
Extended Record	16ch	NTSC:15 PAL:12.5	2 KB	NTSC: 30 PAL: 25	10 KB	Both
Event Only	NTSC: 0 PAL: 0		–	NTSC: 30 PAL: 25	10 KB	Both
OFF	User selected		User selected	User selected	User selected	User selected

Record Mode: CIF mode (NTSC: 360x240@240PPS) (PAL: 360x288@200PPS)

3. The following three tables are offered for users who use DVR-16TT unit.

Preset Item	Normal PPS		Normal Size	Event PPS	Event Size	Event Active
Best Quality	16ch	NTSC:7.5 PAL:6.25	19 KB	NTSC:30 PAL:25	19 KB	Both (Alarm + Motion)
Standard	16ch	NTSC:7.5 PAL:6.25	11 KB	NTSC:30 PAL:25	19 KB	Both
Extended Record	16ch	NTSC:7.5 PAL:6.25	3 KB	NTSC:30 PAL:25	19 KB	Both
Event Only	NTSC:0 PAL:0		–	NTSC:30 PAL:25	19 KB	Both
OFF	User selected		User selected	User selected	User selected	User selected

Record Mode: Full-D1 mode (NTSC: 720x480@120PPS) (PAL: 720x576@100PPS)

Record Mode: Half-D1 mode (NTSC: 720x240@240PPS) (PAL: 720x288@200PPS)					
Preset Item	**Normal PPS**	**Normal Size**	**Event PPS**	**Event Size**	**Event Active**
Best Quality	16ch NTSC:15 PAL:12.5	10 KB	NTSC:30 PAL:25	10 KB	Both (Alarm + Motion)
Standard	16ch NTSC:15 PAL:12.5	6 KB	NTSC:30 PAL:25	10 KB	Both
Extended Record	16ch NTSC:15 PAL:12.5	2 KB	NTSC:30 PAL:25	10 KB	Both
Event Only	NTSC:0 PAL:0	—	NTSC:30 PAl:25	10 KB	Both
OFF	User selected	User selected	User selected	User selected	User selected

Record Mode: CIF mode (NTSC: 360x240@480PPS) (PAL: 360x288@400PPS)					
Preset Item	**Normal PPS**	**Normal Size**	**Event PPS**	**Event Size**	**Event Active**
Best Quality	16ch NTSC:30 PAL:25	5 KB	NTSC:30 PAL:25	5 KB	Both (Alarm + Motion)
Standard	16ch NTSC:30 PAL:25	3 KB	NTSC:30 PAL:25	5 KB	Both
Extended Record	16ch NTSC:30 PAL:25	1 KB	NTSC:30 PAL:25	5 KB	Both
Event Only	NTSC:0 PAL:0	—	NTSC:30 PAL:25	14 KB	Both
OFF	User selected	User selected	User selected	User selected	User selected

5.3.3   Per Camera Config

Per Camera Config menu is used to set the Day / Night / Weekend PPS (Picture per Second) and recording quality for each channel. The <Preset Configuration> must be set to <OFF> for accessing these schedules.
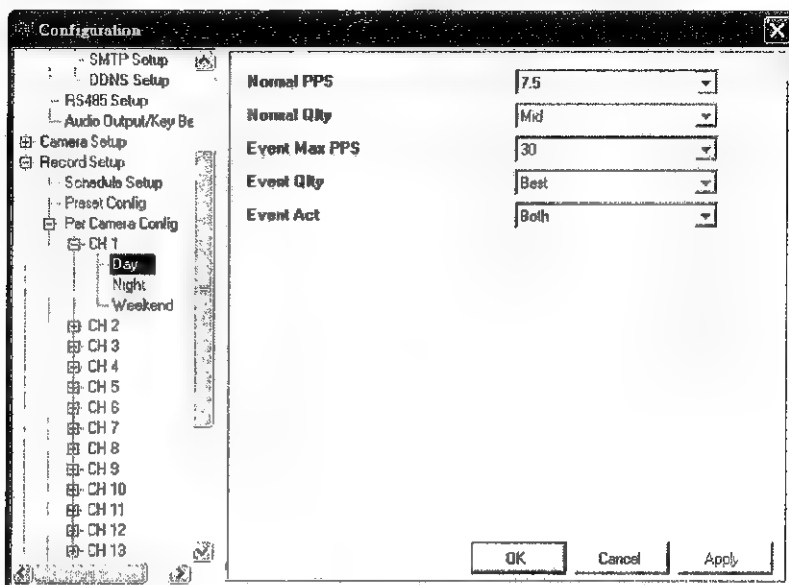
- **Normal PPS**

  Normal PPS (Picture per Second) is used to set the recording rate for normal status. The available options are <0>, <1>, <3.75>, <7.5>, <11.3>, <15> and <30> KB.

  Please note that the total normal pps for all channels is limited under the maximum PPS for each Record mode. To increase one channel's pps, you may have to reduce other's first. Event pps is not restricted to this rule, since a smart event scheduler will handle to the total pps with a correct weighting.

- **Normal Size**

  The item is used to set the picture size for normal status recording. Available options are <Low>, <Fair>, <Mid>, <High>, and <Best>.

- **Event Max PPS**

  Event Max PPS is used to set the event recording rate for Event status. The available options are <0>, <1>, <3.75>, <7.5>, <11.3>, <15> and <30> KB. Normally, the Event PPS is set to equal or greater than Normal PPS; the setting is depends on the application. If the Event PPS is set to <0>, **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit will not record events during alarms.

- **Event Size**

  The item is used to set the picture size for event status recording. Available options are <Low>, <Fair>, <Mid>, <High>, and <Best>.

- **Event Active**

  Users are allowed to choose the alarm record method. The available options are <Alarm> (alarm events), <Motion> (motion detection events), <Both> (alarm event + motion detection), and <None> (no events active). The default setting is <Both>, which includes Alarm and Motion event recording.

5.3.4 ezRecord Setup

This record option allows a user to select the total amount of days the unit will record before the unit starts to overwrite. The frame rate and the quality settings will auto configure. We suggest that the Quality should be no less than "Middle".

Note that the item can be reached only when you select <ezRecord> as the option for <Preset Config>.
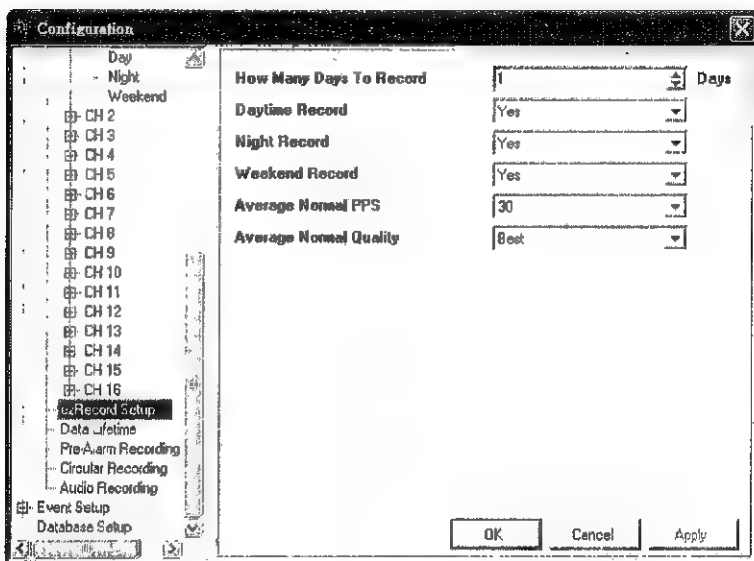
To setup the ezRecord Setup, follow these steps:

- <How Many Days To Record>: The average normal PPS & Quality will be adjusted automatically. The maximum of days depends of the size of your HDD, in other words, the larger the HDD installed, the more days the unit can record.
- <Daytime Record>: This item is for you to select whether you want the DVR to record during daytime.
- Repeat the same procedures for the Night and Weekend, respectively. Note that <Weekend Record> will be not accessible if you select <NO> for the item <Weekend Schedule> in <Schedule Setup>.
- <Average Normal PPS>: Select the PPS, and the <How Many Days To

Record> will be computed automatically.

- <Average Normal Quality>: Select the Quality, and the <How Many Days To Record> will be computed automatically.

⚠️ NOTE: The current number of connected cameras will affect the recording quality automatically calculated through the <ezRecord Setup>. Therefore, once you disconnect cameras or connect more cameras to the unit, you should reset the <ezRecord Setup>.

5.3.5 Data Lifetime

Data Lifetime indicates the time (in days) that recorded data will remain in the HDD.

Set the data lifetime by clicking the UP and DOWN arrows. The value ranges from <1> to <365> days, or select <0> to disable the function.
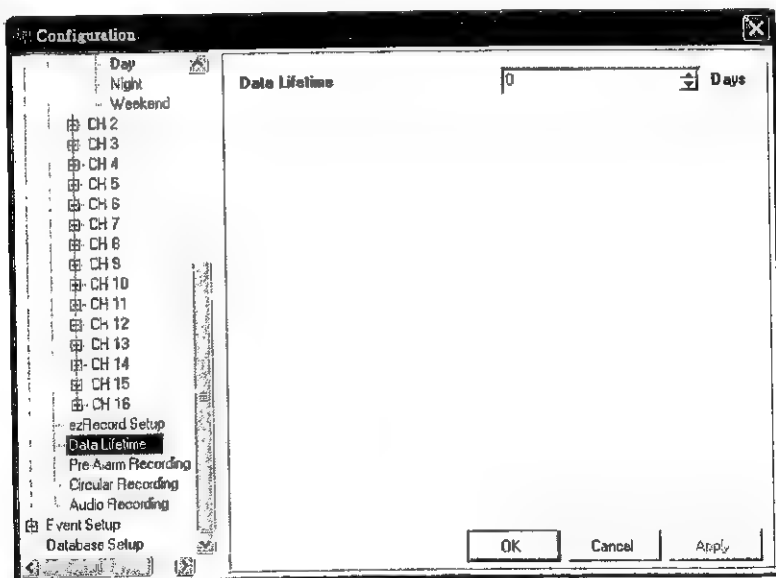
5.3.6   Pre-Alarm Recording

Used to set the duration (in seconds) of pre-alarm recording. When an event is triggered while normal recording is in effect, the unit will start copying the pre-alarm and the post-alarm video to the event video. The pre-alarm duration can be set from 0~30 seconds. The default setting is 15 seconds.
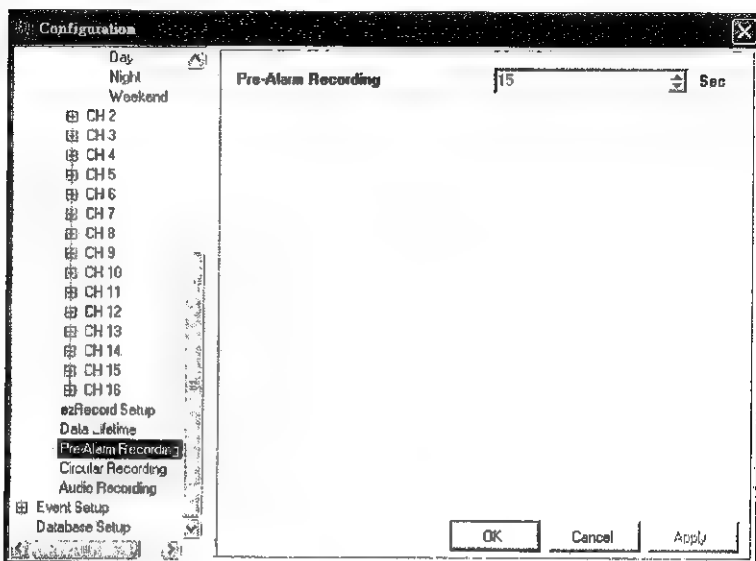
The quality of the pre-alarm video is the same as the quality setting for normal record video; and the quality of the post-alarm video is the same as the quality setting for event record video.

5.3.7　Circular Recording

Users are able to record video either in circular mode or in linear mode. If you choose to record in circular mode, then the unit begins to overwrite the oldest previously recorded video.. If you choose to record in linear mode , the unit stops recording when the HDD is full.

Select <ON> to record video in circular mode, or <OFF> in linear mode.
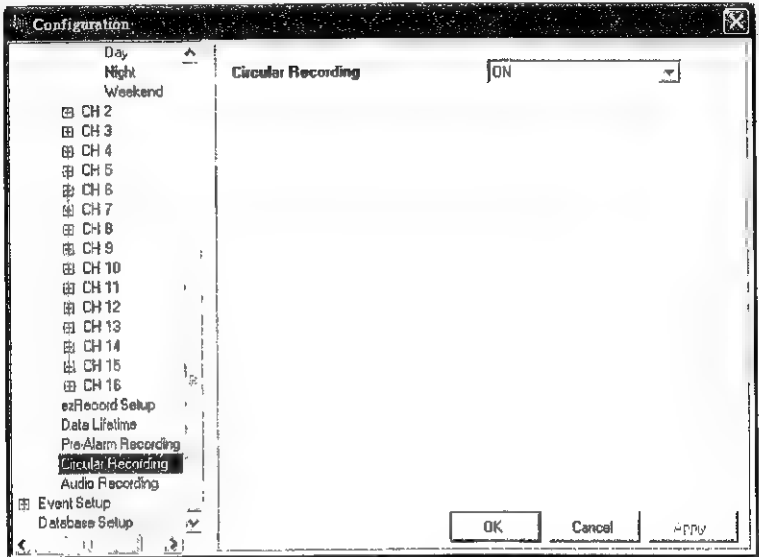
5.3.8   Audio Recording

User are able to enable / disable Audio recording function of the unit. When set to <ON>, audio input is recorded and saved with the video. When set to <OFF>, audio is disabled. The default setting is <ON>.
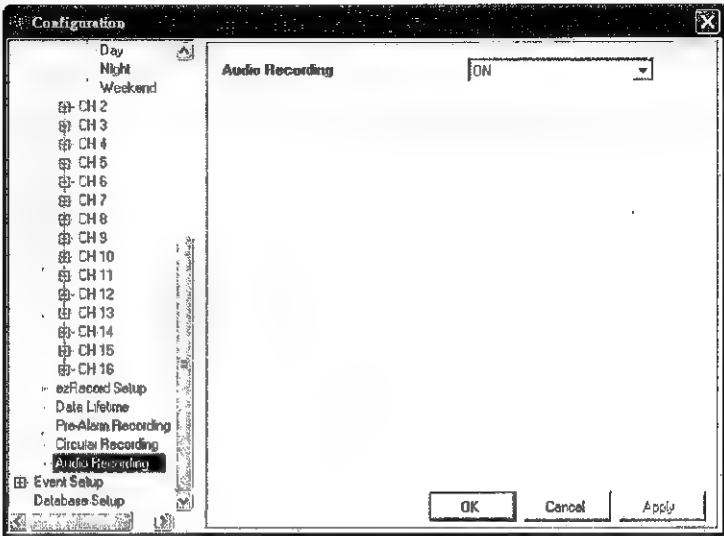
5.4   Event Setup

Event Setup menu allows users to determine **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit's response to an alarm event.

Click <MENU> button on the main window toolbar, and click the plus icon to expand the Event Setup menu.

5.4.1 Internal Buzzer

This item allows user to enable / disable the unit's internal buzzer. If set to <ON>, the buzzer is activated. If set to <OFF>, the buzzer is not activated. The default setting is <ON>.
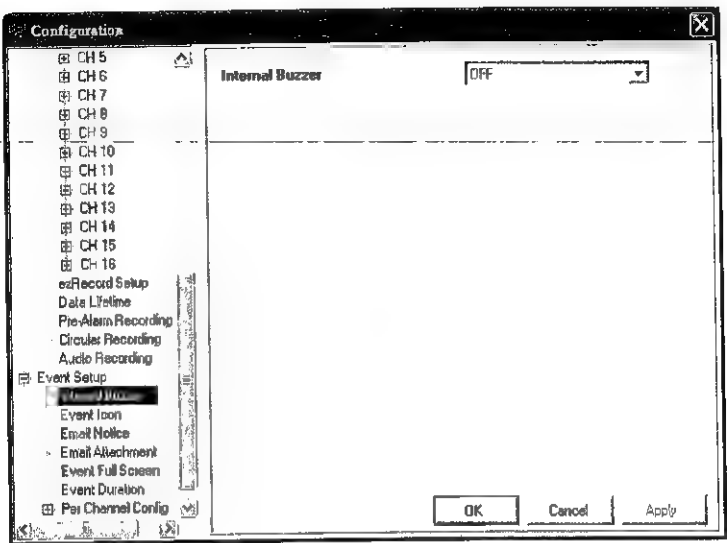
5.4.2 Event Icon

Users are able to enable (ON) / disable (OFF) the display of Event Icon on the monitor when an alarm event occurs. The default setting is <ON>.
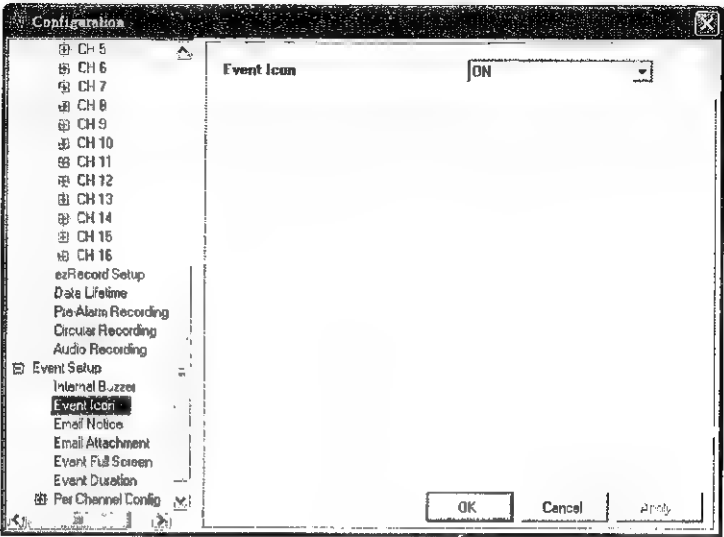
The event types are represented by a character respectively; the descriptions are shown in the table below.

Event type	Description
A	Alarm in event
M	Motion detection event
L	Video loss event

5.4.3   Email Notice

Used to enable (ON) / disable (OFF) the Email notification of an event. When an alarm event is triggered and <Email Notice> is enabled, an e-mail will be sent to a specific email address.
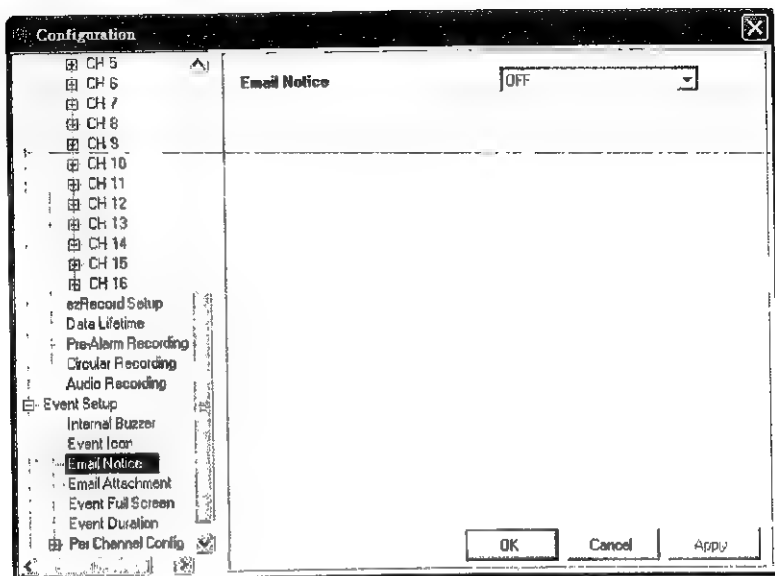
5.4.4　Email Attachment

Used to enable (ON) / disable (OFF) the Email Attachment of an event. When an alarm event is triggered and <Email Attachment> is enabled, a video attachment will be sent to the specified e-mail address.
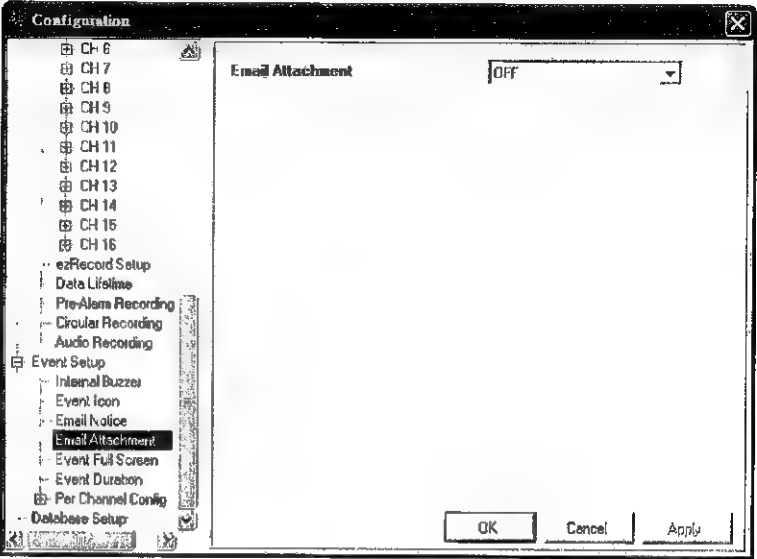
5.4.5   Event Full Screen

This function sets the DVR to display Full Screen in Main, Call, or Both monitors when an event takes place.
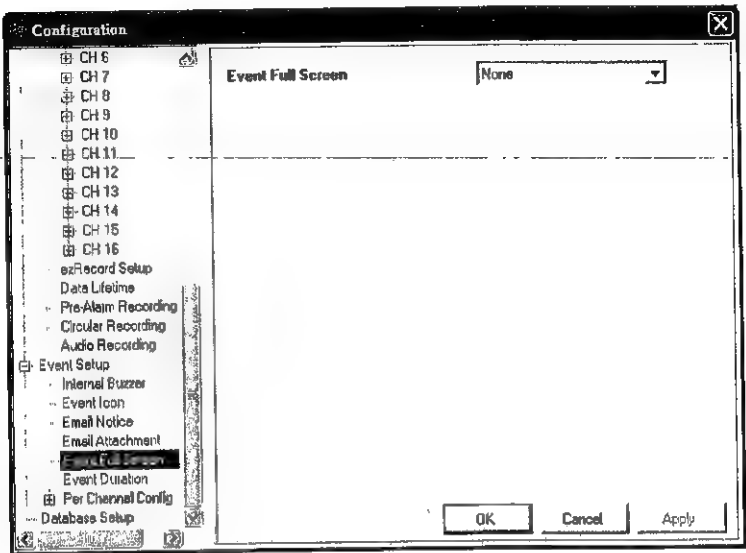
5.4.6   Event Duration

Determine the duration of the buzzer and Alarm Out relay function after an alarm is triggered. The available event duration range is from 1 second to 100 seconds. The default is 5 seconds.
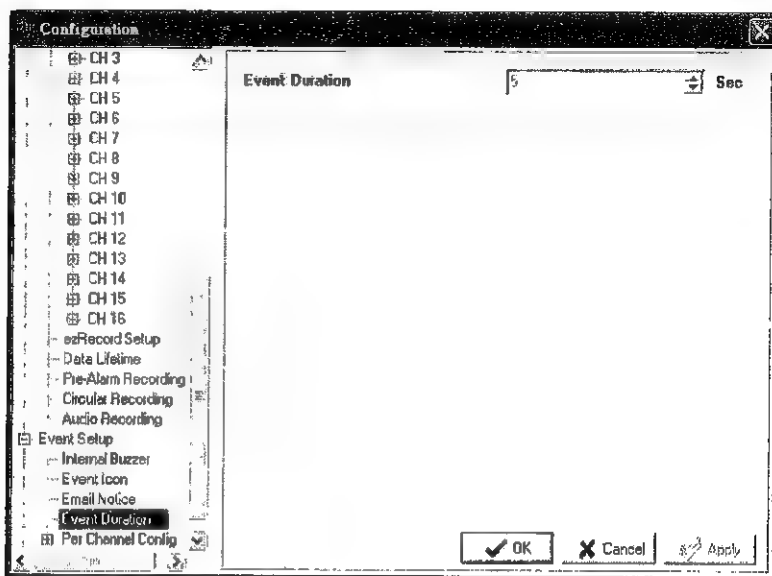
5.4.7   Per Channel Configuration

This item is used to set how alarm conditions are handled.

Select a desired channel and configure its settings, such as Video Loss Detect, Motion Detect and Alarm In / Out functions.

```
Per Channel Config
⊟ CH 1
        Video Loss Detect
      ·   Motion Detect
        Detection Config
        Alarm In
        Alarm Out
        Voice Alarm
⊞ CH 2
```
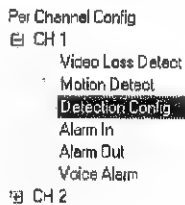
Video Loss Detect
Used to enable / disable Video Loss as an alarm event. Select <ON> to enable Video Loss alarm events, <OFF> to disable.

Motion Detect
Used to enable or disable the motion detection function of the **DVR-4TN/**

DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT series. By default, the value is <OFF>.

If motion detection function is enabled, It is required to define the motion detection parameters such as detection area and sensitivity settings.

Detection Configuration
Click and the menu displays as below figure.
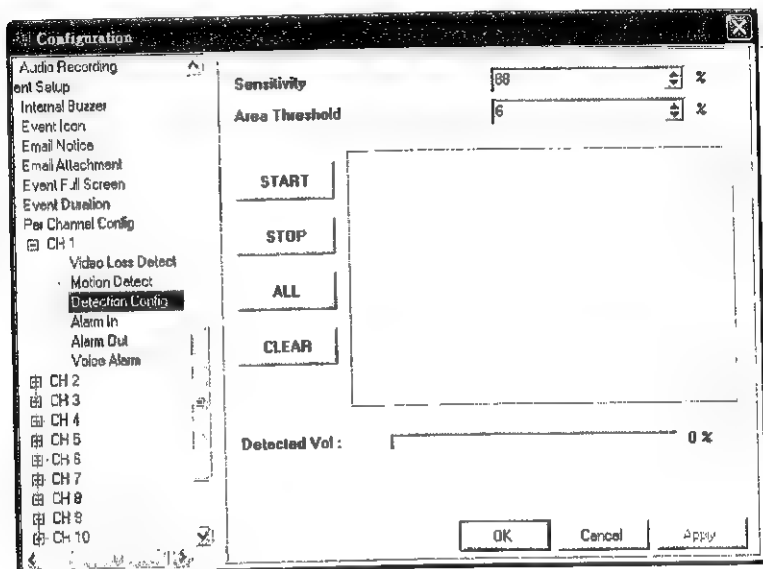
- **Sensitivity**
  The item is used to set the sensitivity of detection grids for the camera. A larger number (in percent) indicates more sensitive motion detection. A motion alarm will be triggered, once the amount of motion detected exceeds the Threshold value.

  Click UP / DOWN arrow buttons to adjust the value. The value is indicated in 4% increment.

Note that every time you change a setting, click on "Apply" button to save changes.

- **Area Threshold**

  <Area Threshold> indicates the motion alarm trigger level; if the percentage of triggered grids in the detection area is greater than the set value, the motion alarm will be triggered.

  For example, if 10 grids are selected and the <Area Threshold> value is 70%, the motion alarm will be triggered when seven grids detect motion.

  Click UP / DOWN arrow buttons to adjust the value. The value is indicated in 4% increments.

  Note that every time you change a setting, click on "Apply" button to save changes.

  click ⎣ⁿᵃʳᵗ⎦ to start detecting; click ⎣ˢᵗᵒᵖ⎦ to stop detecting; click ⎣ᴬᴸᴸ⎦ to select all grids; and click ⎣ᶜᴸᴱᴬᴿ⎦ to clear all selected grids.

Alarm In

This item allows user to enable / disable alarm input detection. According to your application, select <N/O> (Normal Open) or <N/C> (Normal Close) to enable the alarm input detection or select <OFF> to disable the detection. The default setting is <OFF>.

If you set this item to <N/C> but did not install any device to the unit, the alarm will be triggered and the Event icon displayed continually until this item is changed to <N/O> or <OFF>.

Alarm Out

This item allows user to assign an alarm on certain channels to activate the relays. These signals can be used to drive a light or siren to indicate an alarm event.

Select from the options: <A Only> indicates "Alarm Out A", <B Only> indicates "Alarm Out B", <Both> indicates "Both Alarm Out" and <None> indicates "No Alarm Out". The default setting is <None>.

Voice Alarm

When Voice Alarm is enabled and the alarm is triggered, a verbal warning (pre-recorded) will be sent to the speaker which is installed near the location where the alarm was triggered. For instance, if the alarm of Channel 2 is triggered and a speaker is connected from the DVR, the speaker will voice a verbal warning.

6. Trouble Shooting Guide

If the server requests an ocx renewal when you try to connect with the remote software the following screen displays repeatedly, please follow the steps to delete the temporary internet files.
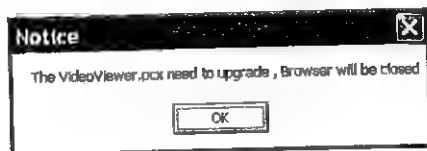
- Select <Tools> from the main menu of the web browser, then <Internet Options>, and then click the <General> tab.
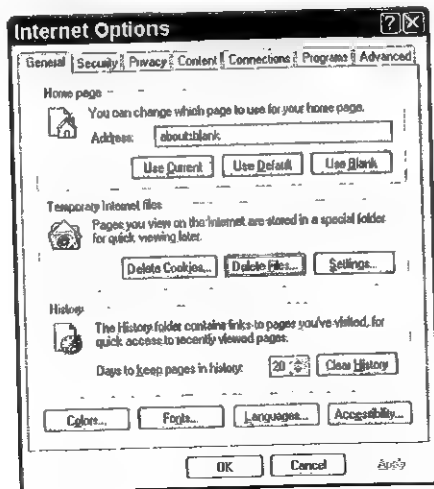
- Click the <Delete Files> button in the Temporary Internet Files field; the screen displays as shown below.
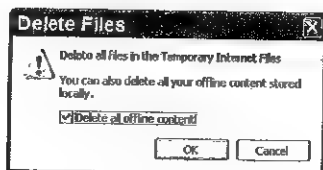
- Enable the <Delete all offline content> and click <OK>.
- Now, enter the IP address of your **DVR-4TN/ DVR-8TN/ DVR-16TN/ DVR-16TS/ DVR-16TT** series unit to make the connection again.

Appendix A: Setting up a DVR behind a Router

This appendix describes how to set up a router if the DVR connects to the internet via a router.

To properly operate a web server, e.g. a DVR, the user has to set up both the IP and port of the DVR, which are essential for data and command transmission. The port setting is adjustable in OSD setup menu of DVR and only one port is needed to do remote operation. Typically and by the default, the DVR operates on port 100. Please make sure that port 100 is not blocked by your ISP or you will have to find another available port and change the port setting in the DVR accordingly.

PC
Remote User

Internet

DVR 1
192 168.0.10

The example shown below now utilizes a router which will allow for multiple connections. This "circuit" is called a LAN (or local area network). The router will have its own IP address (determined by the router manufacturer) and its IP address will dictate what the DVR's IP will eventually be. The two PC's in this example will be set to "DHCP" which means that the router will automatically assign an internal IP address to them. The DVR's conversely, will have DHCP set to off in the LAN setup menu of the DVR and an appropriate IP for these units will have to be manually entered in the LAN setup menu in the DVR.

For Internet connectivity, the router will need to have the internal IP addresses of the DVR(s) forwarded to a specific port in the router and that port must be "Open" in the router. Once "Port Forwarding" has been successfully entered and saved in the router, stabling a remote connection will be possible by entering the Dynamic address of the modem (Wan IP) in the address bar of Internet Explorer along with the Trigger Port. In this example, the address is: http://218.160.54.13:100.

See your router manufacturer's websites for more instructions on port forwarding.

Following is an example of how the router should be set.

Router	PC	DVR 1	DVR 2
(D-Link DI-724P+) WAN IP: 218.160.54.13 LAN IP: 192.168.0.1	IP: 192.168.0.100	IP: 192.168.0.167 Trigger port: 100	IP: 192.168.0.200 Trigger port: 101

- To change the setting of the router, you need a PC with web browser.
- Connect to D-Link DI-724P+ from PC via IE. The setup screen will show after entering the correct user name and password.
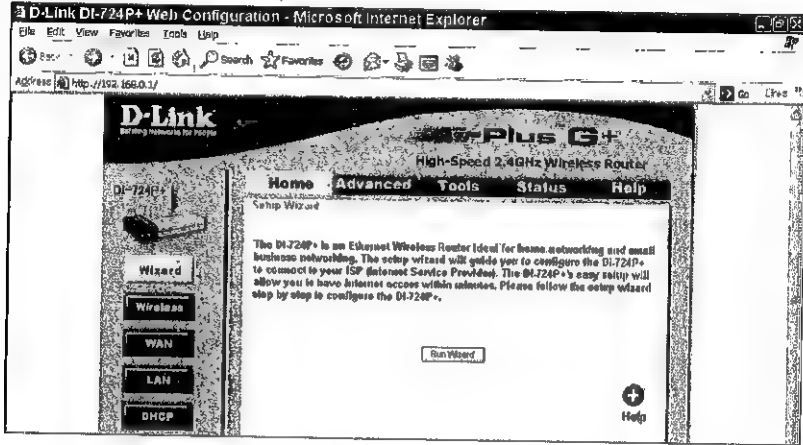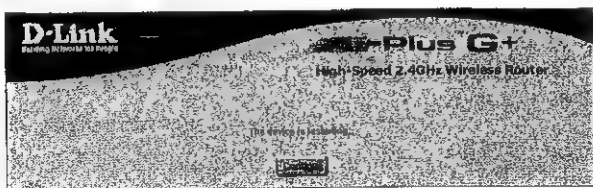
- Click the <Advanced> tab and follow the steps to set up web port forward to DVR 1.
  - A. Select the <Enabled> to set up the service.
  - B. Enter the name of the setting in the Name field: DVR 1.
  - C. Enter Private IP: 167
  - D. Choose <TCP> as the Protocol Type.
  - E. Enter Private Port: 100
  - F. Enter Public Port:100.
  - G. Click <Always> for the Schedule setting.
  - H. Click <Apply>.
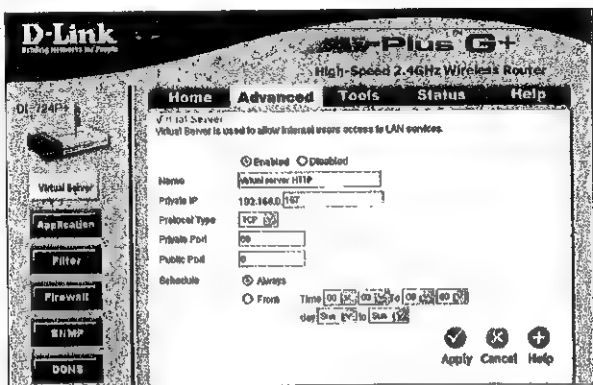
((change screen capture))

- Click <Continue> to go on when the following screen displays.

- Follow the steps to set up web port forward to DVR 2.
  - A. Click <Enabled> to set up the service.
  - B. Enter the name of the setting in the Name field: DVR 2.
  - C. Enter Private IP: 200
  - D. Choose <TCP> as the Protocol Type.
  - E. Enter Private Port: 101.
  - F. Enter Public Port: 101.
  - G. Click <Always> for the Schedule setting.
  - H. Click <Apply>.

- Now you can see DVR 1 via http://218.160.54.13:100 and DVR 2 via http://218.160.54.13: 101.

- If there are more than one DVR behind the router, repeat the steps for port forwarding setting.

SpecoPlayer™ Software

1. Overview

SpecoPlayer™ the software is enabling users to locally playback the *.drv files recorded by their Multiple Channel DVRs.

⚠ **NOTE:** The video playback software accepts and playback *.drv files only.

2. Install the Software to Your PC

Click on the "Download DVRPlayer" and a window, shown as below, appears to ask whether you want to download the DVRPlayer.zip file. Click "Save" to save the software to you PC.
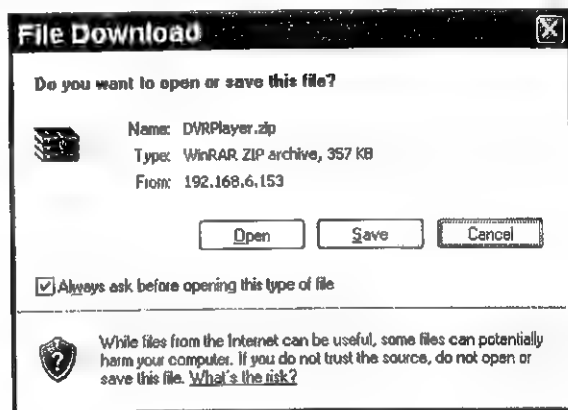
After clicking "Save", the below window appears for you to choose the destination.
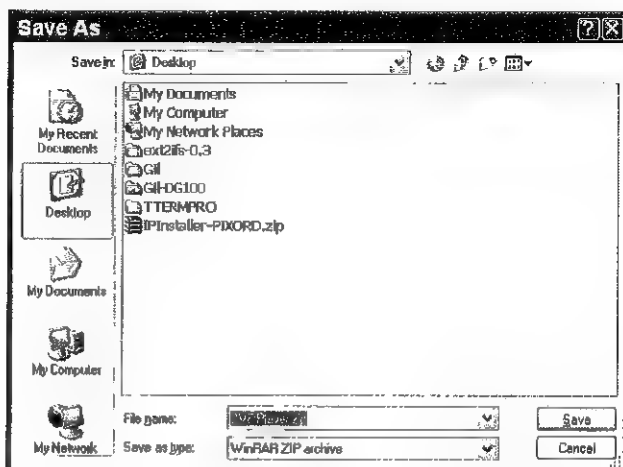
click "Save" to save the software to you PC. The file you downloaded is a *.zip file, double click on it to unzip the software; four files will be found on the chosen destination: autorun.inf, DVR_Player.exe, Player.ico and PlayerLogo.jog.

Click on the DVR_Player.exe, and the Main Window of **SpecoRemote**™ is displayed

3.   Main Window

The **SpecoPlayer**™ Main Window displays a list of the cameras on the top-left and the mode-selected buttons on the bottom-left. Users are allowed to select the desired viewing mode,4-window, 9-window and 16-window, using these buttons.
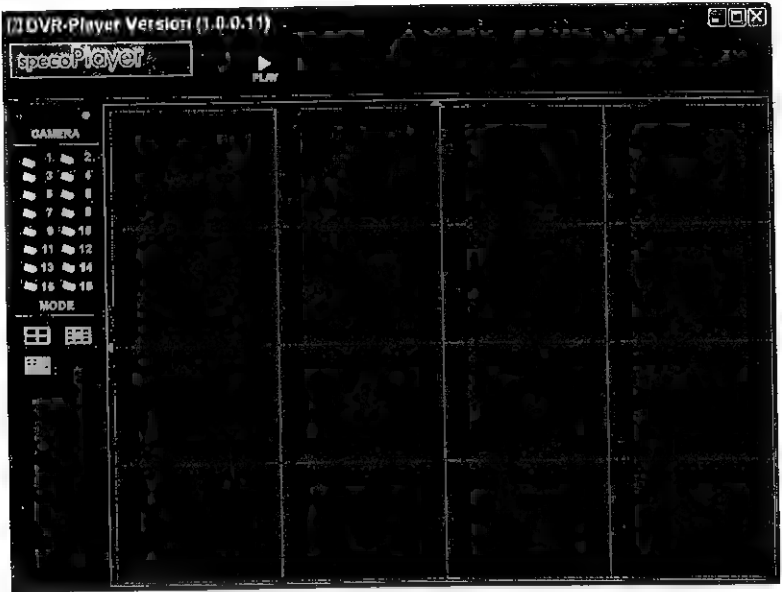
4. To Local Playback the Video

Click on   <Local Playback> on the toolbar on the top left corner of the Main
Window. The "Playback" window displays, shown as the figure below:
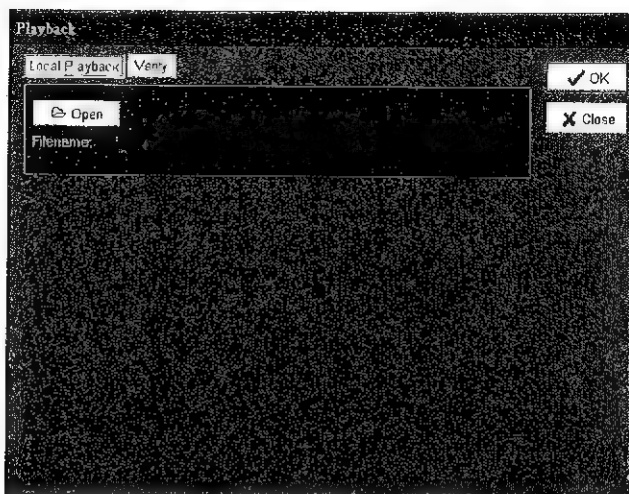
To playback the recorded video locally:

1. Click <Open> to select the *.DRV file you wish to playback from your PC.
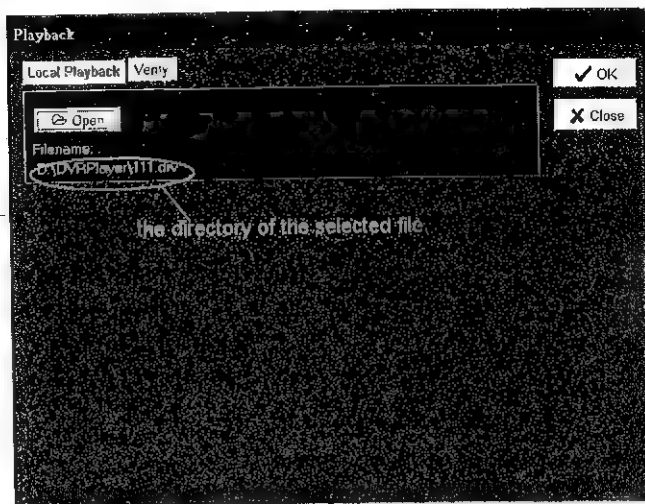
2. After selecting the desired *.DRV file, click [✔ OK] to start playback.
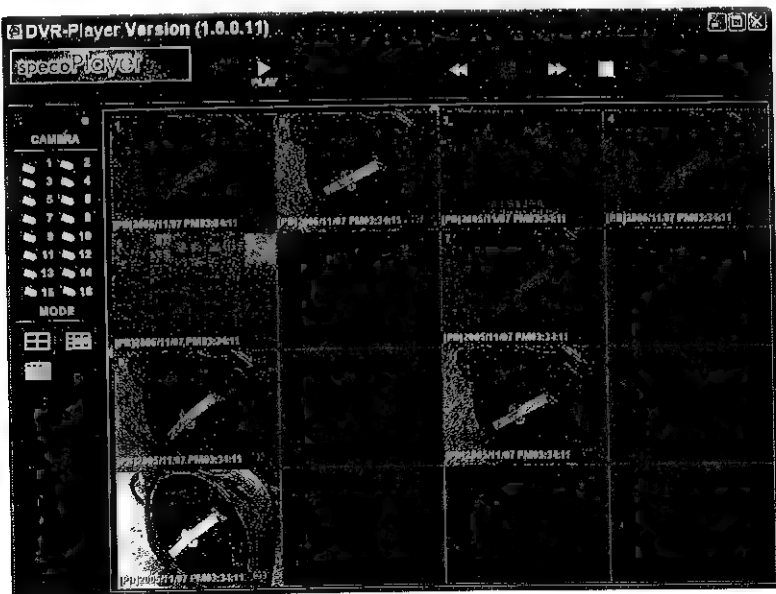
The following table describes the available buttons used while playing back the *.drv file.

BUTTON	ICON	DESCRIPTION
Fast Rewind	◀◀	Click to fast rewind the recorded video. Click repeatedly to select the desired playback speed from 1X, 2X, 4X, 8X, 16X and 32X.
Playback	▶ PLAY	Click to playback the *.DRV file. The icon is displayed when the playback operation is paused.
Pause		Click to pause the playback. The icon is displayed while playing back the video.
Fast Forward	▶▶	Click to fast playback the recorded video. Click repeatedly to select the desired playback speed from 1X, 2X, 4X, 8X, 16X and 32X.
Stop	■	Click to stop the playback.

4.1   Single Step Forward and Backward

This software allows you to play single step forward and reverse. Follow these steps:

- Press one of the Channel buttons to display the corresponding camera in full screen.
- Press Pause to pause on the wanted playing image.
- Press Fast Rewind / Fast Forward Direction keys to advance the video a single step in reverse or forward.
- Press Playback again to resume the playback operation.

5. Verify the Digital Signature

The Digital Signature authenticates a video file exported from the unit.
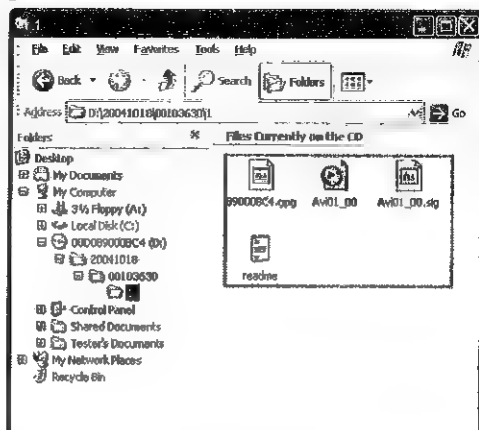
5.1 To export recorded video with digital signature

Export recorded video with digital signature to a USB hard drive, or to a CD-RW drive / DVD+RW drive for later burning, follow this procedure: in <Export> menu, select a Camera(s) and Start/End Time recorder, then choose "YES" for <Digital Signature>.

Video Export	
1. Select Device	
2. Select Ch:	CH1 CH2 CH3 CH4
3. From	2005/03/19 AM 07:50:05
4. To	2005/03/28 PM 03:09:18
5. Select Events	
6. Data Type	Normal
7. Export Format	DRV
8. Digital Signature	NO
9. Erase Disc	NO
10. Begin Export	NO

If you plan to export video file to a CD-RW drive or DVD+RW drive, note that the maximum size for exporting to a CD-RW drive is 700 MB and 1.5 GB for a DVR+RW drive. To export 1GB file with digital signature, it may take up to 30 minutes.

Each recorded video will be exported into four files with different sub-filenames, including *.gpg, *.drv, *.sig and readme txt, which are shown in the following figure.
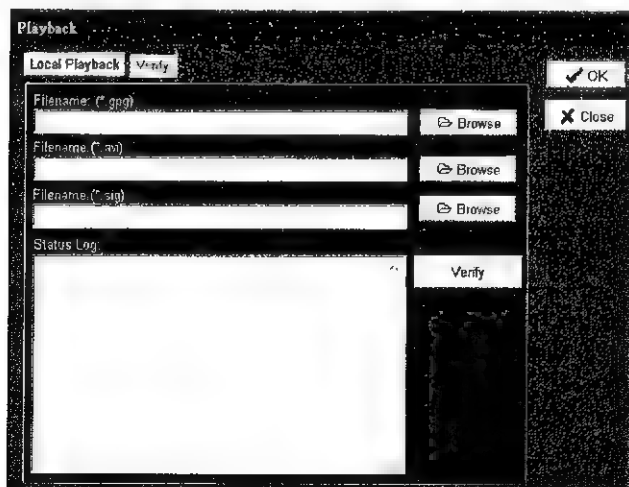

5.2 To Verify the Exported Recorded Video

Following are the procedures for digital signature verification:

1. Start your **SpecoPlayer™**.
2. Click <Play> on the main window tool bar, the "Playback" window displays.
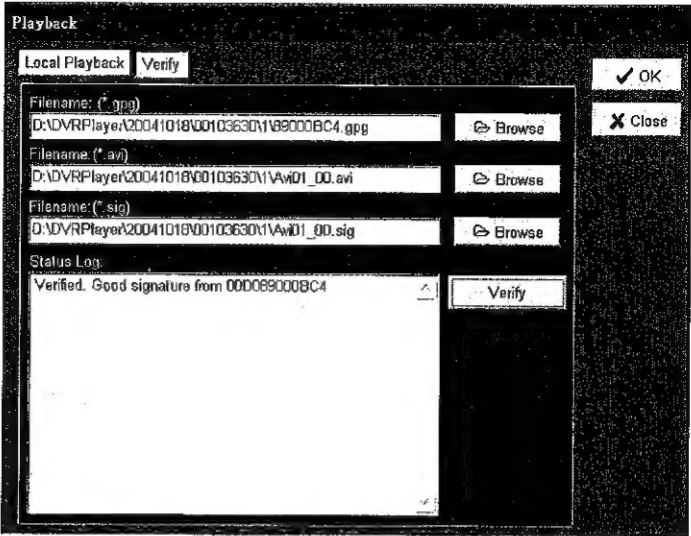3. Click [Verify] tab on the top of the "Playback" window.

4. Click <Browse> to select the *.gpg, *.drv, *.sig files respectively, which are associated with the exported video you want to authenticate.
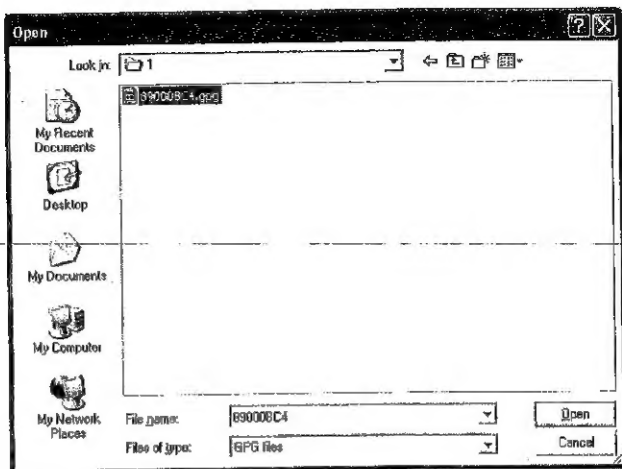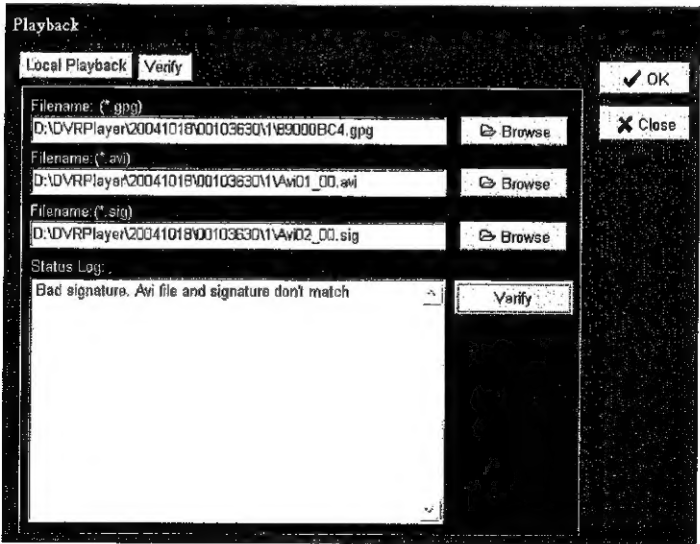

5. Click <Verify> to start verifying Digital Signature.
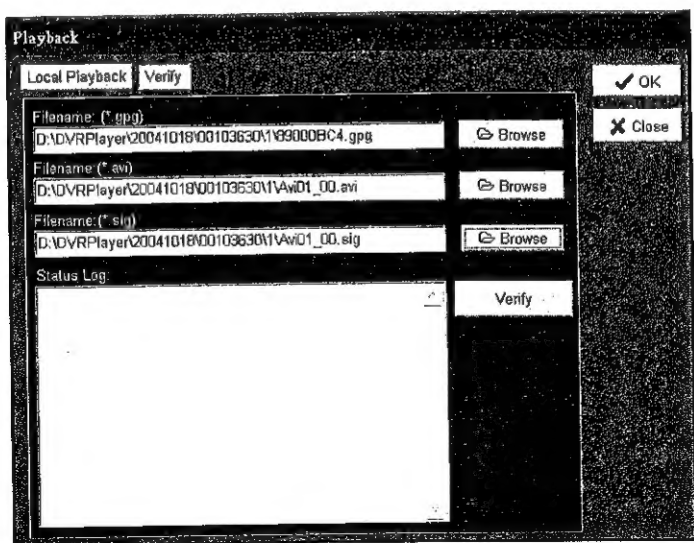
6. The result of verification shows in the <Status Log> field. It returns a "GOOD" or "BAD" signature result. A "GOOD" signature indicates the exported clip has not been altered.

<Good> Signature

<BAD> Signature